"Bradshawe" Lecture
ON
MORBID ARTERIAL TENSION.

DELIVERED BEFORE THE

ROYAL COLLEGE OF PHYSICIANS

On Tuesday, August 18th, 1885.

BY JAMES F. GOODHART, M.D., F.R.C.P.,
SENIOR ASSISTANT-PHYSICIAN AND LECTURER ON PATHOLOGY AT GUY'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—It falls to the lot of the Bradshawe lecturer of to-day to deal with circumstances that are sadly peculiar, and which—young being the days of the foundation—no one has hitherto been called upon to handle. He is here to-day not in his own right, so to speak, but to fulfil the duty, to reap the pleasures, in this instance but sad ones, which are some of the obligations of friendship. In happier fate we should have listened to one of the most distinguished of the younger Fellows of this College, as he pointed, as assuredly he would have done, from the honoured and brilliant past, to the hopes of a robust and seething present, and then, perhaps, on to the

"What Now discovers not, Hereafter knows."

and the boundless capacity of the future, fit subject of discourse by one whose enthusiasm seemed as limitless as it was prodigal. But Mahomed's destiny was not this; his presence has gone onwards, and we who remember its individuality and its vigour may well make it our business to inquire what of the essence—

"The living power, if that which lived
True life, live on"

—of that lost individuality is here.

But, although thus fettered, as I think, in the choice of a subject upon which to lecture—for there are other matters upon which, as being more conversant with them, I would the rather dwell—when I come to examine them, my bonds are those not of restraint, but of freedom. For on the one hand, the memory of the most illustrious Past, although not dead, yet sleepeth, and the task of wakening may most gently and naturally come by time's substitutions and the more vivid impressions of its latest finished effort, the more recent dead. And on the other, in this particular instance, my subject happily embraces the work, not of Mahomed only—not of him first, far from it, though changeful fortune gives him now a courteous, sad, respectful precedence—but of such distinguished Fellows of the College past and present as Bright, Sibson, George Johnson, Owen Rees, Sanderson, Gull, Sutton, Dickinson, Broadbent, Galabin, and others. Indeed, when once the enumeration is begun, I know not where one is to stop, so many, according to my idea of what arterial tension embraces, have worked at some branch or other of it. The subject, therefore, is appropriate whether for a Bradshawe lecture in ordinary, or for one delivered under the, let us hope, long peculiar circumstances which attach to that of 1885, or whether for a lecture emanating from this College, for it concerns itself with a matter which by the work of many of its Fellows has been made, and still is, one of the leading pathological and clinical questions of the day.

I could not, of course, attempt in one short hour to review the whole history of arterial tension—a history practically concurrent with that of the circulation of the blood. Nor is anything of that soporific kind my purpose in this the middle of August. I am only concerned with the latest developments of arterial tension—the application of the idea to what, for want of a better term, I shall call the household explanation of disease. By that I mean an explanation which can be made to apply to such multiform conditions that from one point of view it is a morbific agency the importance of which can hardly be overrated; from another it bears more the aspect of a faded Cambridge blue, so little of depth is there in the colour it contains. These two alternatives will, I believe, fairly represent the value set upon the idea or the fact by practical men in the present day. I do not mean the conception of its value in the mind of the absorbed pathologist; he looks at things with an æsthetic severity of conviction that may chance to arrive at conclusions which are beside and beyond our everyday realities. He works for to-morrow rather than to-day. His mood must often seem to be:

"Yet still shall I speed
On my way without heed,
Nor mourn for the wreck that is doing,
For my calm, cold light
Is my own delight,
And I smile on the ashes of ruin."

The stress of the fight comes not on him; the upheavals produced by his dicta come upon the sons of men, and theirs is the stress in clambering the rugged crevasses of discovery.

Now, arterial tension and Bright's disease have danced so much together of recent years, that it is necessary to occupy much of the time with the aspect of the question derived from their association. Bright in his day noticed the hypertrophy of the left ventricle that occurs in chronic renal disease, and attributed it to the impurity of the blood, and to the extra work thus thrown on the heart, in consequence of the refusal of the tissues to allow a free passage to material of which they disapproved. His words are these: "Either the altered quality of the blood affords irregular and unwonted stimulus to the organ immediately, or it so affects the minute and capillary circulation as to render greater action necessary to force the blood through the distant subdivisions of the vascular system." Dr. George Johnson in his earlier writings maintained much the same view, but abandoned it in deference to the teaching of modern physiologists, for what is now well-known as the stopcock theory, which supposes, and no doubt justly so, that the function of the muscular coat of the arterioles is a controlling one, and that when blood is ill adapted to the tissues control will be increased, and the blood shut off more or less from the tissues. This must necessarily create obstruction behind, throw increased work upon the heart, and thus account for the hypertrophy of the left ventricle. Fully examined, there is not much objection to that way of stating the case, but there is just a touch of fancy in the stopcock simile which provokes the criticism that it smacks too much of a purposive volition. The arteries might seem to say to the heart "You shan't," and the heart to retort, "You shall"; or, as Dr. Dickinson writes: "The heart and arteries are thus represented as acting in antagonism, and hypertrophied by the efforts each makes to get the better of the other, the arteries contracting beyond their wont in the endeavour to shut the blood out of the tissues, the heart using increased efforts in the attempt to overpower their resistance and drive it in; and both, like conflicting athletes, are increased in muscle by the exercise." Dr. Johnson takes exception to that way of stating the case, but it is a clear way of putting the issue raised by a too dogmatic insistance on the stopcock analogy. In that light the theory does seem to me unphysiological. There is no strife in Nature; and if the hypertrophy of the vessels exist, as it surely does, then both it and the increase of the muscular tissue of the heart must be part of one common process—one purpose, if you will—which is consistently and adequately explained by the effort of the entire muscular element of the circulatory system to forward a fluid to which the absorptive or appropriative powers of the tissues are ill adapted. I must say I find myself in complete accord with Dr. Dickinson, and Bright was probably well advised in confining himself to the facts. The bare supposition that the heart is large because it has more work to do is quite unassailable. Nevertheless, Dr. Johnson advanced us an important step by insisting upon the thickening of the vessels, because so little attention had been paid to it. Bright, however, had noticed it, and you will see at once that the knowledge of that time implied its existence. It *must* be so. An athlete uses certain muscles for a certain purpose, and he, perhaps, doubles their size. We do not question the cause or the nature of the hypertrophy; the heart does double duty owing to some impediment in one or other of its valves. Who questions the reason of its increase in size? If the stomach or the intestine have to overcome obstructions, and we find them thickened, again, who disputes the nature of the thickening? It goes without saying. In all these instances we see simple illustrations of a common physiological principle admitted by all. What reason, then, is there to discuss whether the muscle of the arterial coat hypertrophies? Of course it does, when excessive work is

demanded of it, just as organic, or any other muscular fibre elsewhere. Therefore, to the question, Is the muscular coat of the arterioles thickened in chronic renal disease? I reply not so much by a demonstration of the fact, which is, perhaps, not so easy as might at first hand appear, but by an appeal to the entirely *a priori* ground that it must be so. And I do this with intention, in the conviction that the appeal to demonstration and to demonstration only in the present day is too absolute. No doubt it is on the whole the safest ground to tread, but appearances admit often of various interpretations, while, within such limits as its present use, I believe my argument to be unassailable.

Some particular feature will, I say, admit of various interpretations. Thus, Sir William Gull and Dr. Sutton write: "As to the hypertrophy of arterioles we may say that, though the muscle in some of the larger arterioles especially seemed to be increased, yet we are still sensible of the difficulty of giving a true interpretation to such an appearance." They lay stress upon the possibility that irregular and unusual contraction of the vessels, and a want of constancy in the natural thickness of the layer in different arteries of equal calibre, may simulate disease; and those of us who are familiar with the pitfalls which abound, even for the wary, in latter-day microscopy may well be ready to admit that these are no mere captious reservations of the hostile critic. I, however, agree with Dr. George Johnson, Dr. Dickinson, Dr. Galabin, and others, that a comparison of comparable specimens is not so difficult as to throw doubt upon the reality of the hypertrophy.

As regards the existence or not of spasm, Dr. Johnson's position is to my mind inadequate by just so much as he rejects the function of the muscular coat of the arterioles as an auxiliary force in forwarding the circulation. I am aware of the difficulty of this question: that physiologists as a body are in favour of his position, and that demonstrable evidence against it is either absent or indecisive. Nevertheless, I cannot conceive of the evolution of a circulatory system upon lines which, whatever name is applied to them, must be antagonistic. Dr. Johnson makes use of the term "an antagonism of forces." I would rather believe that, developed for a common purpose, and by a gradual evolution, heart and arteries so work together under natural circumstances that we cannot detect their harmony; and that when it is possible to study the action of the muscular coat, it approximates to the conditions of disease. We say, for instance, that non-striated muscular fibre acts slowly and persistently, and that such an action is inconsistent with the lightning wave which would be necessary if the muscular arterioles were a propulsive power. But muscle, organic or other, acts as it is taught to do; the pupil, the œsophagus, the intestine, the uterus, the bladder, none of them act alike, and whether the aid to the circulation be vermicular or what not, it cannot be but that the aid is positive. Some years ago Dr. Charlewood Turner gathered the evidence on this head into a very able paper, his conclusion being entirely in favour of a considerable propulsive force being exerted by the muscular arterioles.[1] Dr. Dickinson also takes this view, and in withstanding the increased blood-pressure it surely must count for something, if it be but the pigmy to the giant.

A pure control theory seems to me to bristle with difficulties in the direction I have indicated; but take the one case of digitalis, which will appeal as much as any to our practical interest in the question. Digitalis is said to increase the strength of action of the muscular wall of the heart on the one hand, of the arteries on the other. If the muscular coat of the arterioles controls and retards the circulation, the undoubted diuretic action of the drug is not easy to explain; and if, as the control theory supposes, the stopcock action is considerable, it would always be a question whether it would do more good by its action upon the heart than harm by its action upon the vessels. At any rate, the increased action of the latter might very conceivably, in a failing heart, bring about sudden dissolution. It cannot be said with any certainty that this *is* one of the risks of its administration. The drug is not without its risks, but they are primary and central to the heart itself, and it would seem that the action of digitalis teaches that the muscular coat of the arterioles makes for propulsion rather than retardation of the circulation. But there can be no muscle, and no physiological muscular action, without the risk of, probably, under such circumstances as these, the frequent exhibition of morbid muscular action or spasm. It is clear that a muscular action which leads to hypertrophy might easily pass into spasm under conditions similar to, but in excess of, those which have provoked the increased action. And, indeed, the assumption of some such spasm, if not necessary, is, at any rate, agreeable to many of the phenomena of Bright's disease. I may instance the headache and the renal asthma, both which are sometimes much relieved by nitrite of amyl and nitro-glycerine, drugs which unquestionably relax spasm, and promote dilatation of the peripheral vessels.

Thus far I have devoted myself to the opinions of Dr. Johnson — first, because they preceded others; and, secondly, by the effective presentation and vigorous advocacy of their author they have done much to promote our advanced knowledge and to widen the borders of their own field of interest. It requires, indeed, but little imagination to believe that without this stage of its growth the present conception of arterial tension would yet have to be developed. But be this as it may, the subject now expands in two noteworthy directions: by the hypothesis that chronic Bright's disease is an arterio-capillary fibrosis, or generalised tissue change, on the one hand; and by the use of the sphygmograph on the other; and it is remarkable how these two lines of observation tend to support each other. As a direct recoil from Dr. Johnson's teaching we may take the former first, although both proceeded independently and concurrently. I said a direct recoil from the teaching of Dr. Johnson, but it was not that; in point of time, and in the position it assumed in the discussion, it seemed to be; but it was rather the outcome of an approach of the question of the nature of chronic Bright's disease from the clinical side, or from a general rather than a local standpoint. Epigrammatically stated from the paper of Sir William Gull and Dr. Sutton it is this: "Old age is not an entity, but a set of conditions predisposing to that state which is called chronic Bright's disease." And while to most this comes in natural order when the prime of life is run, yet to some old age is no matter of years and averages, but the running down of a spring set for an individual. It comes at times even to children. In the tints of summer, yes, even in those of spring, you can read old age if you will. And although chronic Bright's disease is in many cases associated with renal disease, it is not essentially a matter of organs, the generalised change in the tissues of the whole body is *the* essential, and to some this comes not by kidney chiefly, but by lung chiefly, by brain, by heart, and so on.

Now, here comes a difficulty in dealing with the case. May I say that this is a magnificent scheme of decay, which, to discredit, would be to do for this line of thought what I understand is meant by the expression "taking the romance out of life"? Still-life has the *equivalent* of *romance* attaching to it, which to many of us is most attractive, suggestive, and propulsive. We often hear it said in the present day this or that is mere sentiment, as if no solid worth attached to it; but I should like to know whether life would be worth living with all that is comprehended in the term "sentiment" cut out of it. What progress would be made in its absence? And I make bold to say before the Fellows of a College, the reputation of which is based upon a firm foundation of fact laid by many generations of distinguished men, that pathology would lose much of its interest, much of the energy which characterises it and makes it so indispensably and helpfully the groundwork of medicine, physiology complete, if it chained us too subserviently to the march of facts. There are some—yes, many, happily—who are absorbed upon the foundations, but they do not comprise the whole body of workers, and we cannot and would not do without the soul-inspiring idea, the fond imagining of the more precise knowledge of the future, forecast and sketched by the hand of genius.

This is a digression which will be pardoned, in that it helps me to convey what is, I think, both the strength and the weakness of the argument of Sir William Gull and Dr. Sutton. The idea is a suggestive one, and it is largely true. Pathology is distinctly the richer for it, but it derives its strength less from the labours of the histologist than from the bird's-eye view—the intuition, if I may call it so—of experience. There is ground in plenty for the argument that we wear out by tissues or systems: there is, I think, a fair amount of evidence admitting of the opinion that chronic Bright's disease with contracted kidney is a generalised degeneration; but to base it upon the non-existence

[1] On the Function of the Vessels in relation to the Circulation of the Blood. (St. Thomas's Hospital Reports, New Series, vol. vi., 1875.)

or unimportance of muscular hypertrophy in the arterioles, and to ascribe the thickening which exists to an essential hyaline fibroid degeneration, is equivalent to the unskilful selection of a battle-field.

How far, then, do I think it true? Perhaps an answer to that question may best be arrived at by continuing upon the other, how far it is not true. And going to the other end of the circuit, there are groups of cases which admit of no doubt, in which the disease in the kidney is certainly the cause of the changes in the heart and arteries. One of the first steps in the direction of proof of this kind was made by Dr. Galabin, when he showed that the heart and arteries are hypertrophied in a large proportion of cases of chronic parenchymatous nephritis (which as a group I may perhaps still call the large white kidney group, although the kidney is often contracted), and which are indubitably primarily renal. I have taken up the cases where he left off, and have collected from the post-mortem records all the cases of chronic parenchymatous nephritis that occurred in the ten years 1873 to 1882, amounting in all to 191. At the lowest estimate, taking the average of the healthy heart at twelve ounces, which is full high, 103 were above this and 83 below it. But the proportion claimed by hypertrophy is considerably higher than this, for in the minority are fifteen children under ten and seven more between ten years and fifteen, and others in which the left ventricle is stated to be thick or markedly hypertrophied, although the actual weights would not indicate this. I think the preponderance may fairly be put at two to one. It has been said that hypertrophy is less frequent in these cases than in the granular kidney. But figures do not show this well. I have tabulated also the cases of granular kidney, recorded in our Reports, a total of 342 cases, and taking the average again as twelve ounces, 103 are below that line and 226 above it. But it is not easy to come to a positive opinion in this way. I think Dr. Dickinson makes the observation that some of the cases of parenchymatous nephritis are primarily cases of granular kidney, and in looking over a large number of cases like this, one cannot but be confirmed in the opinion, derived from clinical study, that it is quite impossible to separate too arbitrarily between the one form of disease and the other. The more acute form of disease is often far more insidious than is usually taught; the granular kidney frequently winds up with tubal or parenchymatous changes.

Perhaps I may remark, in passing, that a large series of observations of this kind may possibly throw some light upon the moot point, the rate at which the heart can put on muscle; for the heart has been found large in some cases in which there was every probability of the renal disease having existed but a few weeks. Such differences as do exist between the two classes of cases are of more *practical* moment than of worth as distinctions; for, in the first place, it may be said that the failure of health and of nutrition will not infrequently combine so to reduce the arterial tension as to deprive the circulatory system of any excuse for hypertrophy. The damage, too, in these cases is much more severe at any one time than the granular kidney can show; the left ventricle has, in consequence, more tendency to dilate, and thus to relieve the excessive tension and forestall the hypertrophy by the death of the patient. I put it thus pointedly as a fact of importance. In proportion as the renal disease is sudden and severe, so is the risk of dilatation of the heart. The more insidious it be the more likely is the cardiac hypertrophy to be present in greatest perfection. Serious acute renal disease means sudden increase of arterial tension, and the imposition of greatly increased labour on the heart, and rapid dilatation of its wall becomes a serious risk. I speak with some diffidence before those of larger experience than my own; but surely this is corroborated by clinical observation. The most acute and sudden form of renal disease with which we are acquainted is undoubtedly that following scarlatina, and it is in just these that acute dilatation of the heart occurs most typically. That coming next in severity is the chronic parenchymatous nephritis, in which dilatation is common, and although it is more or less combined, it also closely competes with the hypertrophy. The granular kidney which has small and inappreciable beginnings, and which drags its slow course through many years, while it cannot be said by any means to be ignorant of dilatation, is, nevertheless, the disease in which the well-known simple hypertrophy is most often found, and to a degree which is perhaps never so under other circumstances.

There is another fact of similar bearing. It is this: that while granular kidney often terminates in cerebral hæmorrhage (86 times in 117 cases of apoplexy[2]), the subject of chronic parenchymatous nephritis rarely dies by that means. Bartels states that he has never known death to occur in such cases from apoplectic effusion, and it is certainly a rare occurrence.[3] At first sight this might seem to be agreeable to such as maintain that the disease of the vessels is a peculiar one and independent of the nephritis, for here is a severe form of renal disease, and the large heart in most cases, yet seldom apoplexy. But the better explanation is probably that I have given. It is obvious that dilatation of the heart is unfavourable to the occurrence of apoplexy; it relaxes the tension at the centre, which would otherwise be put on at the periphery, and death comes about by cardiac failure, and not by peripheral hæmorrhage. I have only time to add on this point that it applies, of course, not only to parenchymatous nephritis, but to all cases, more or less, in which there happens to be dilatation of the left ventricle. It is worth remembering, for it cannot be unimportant, whether the risks of an individual are those of apoplexy or of the more gradual process of cardiac failure, and the undoubted value of a drug such as digitalis in many of these cases is a ready criterion of the importance of the point in the matter of treatment.

I have still something to add concerning the pathology of the arterial changes. Enough has been said about the reality of the muscular hypertrophy; but what about the excess of hyaline fibroid material and the atrophy of the muscular coat in the arteries that have been observed? I have no doubt of the correctness of the observation, and very little difficulty in explaining it. There is a general demand for extra labour and a physiological response represented by hypertrophy; but in the process not only does the muscle thicken, the other constituents of the arterial coats *must* thicken too, and thus the excess of hyaline fibroid—of the connective of the coats of the vessels—is natural to the circumstances. But, further, when once a growth is started which operates impartially upon several varieties of tissue, high and low, if the conditions for obtaining supplies are in any way prohibitory, as may be concluded is the case with the arterial coats, to judge from the frequency with which, even in otherwise sound bodies, atheromatous changes are met with, the least specialised, or less dainty feeders, are likely to have the best of it and to supplant the more highly specialised. There are plenty of instances in pathology of the ease with which embryonic or structureless tissue gets a living by the process which is popularly known as "sponging." There could not, indeed, be a more apt term, for these lowly organised tissues seem to live by a process of simple soaking. Take an ante-mortem polypus in the heart, or even those larger masses of thrombus which sometimes form in the apex of the left ventricle. In either case there are considerable tracts of clot which must have have maintained themselves in this manner, and if you tell me that these things are dead, then so are we in great part (as has indeed been contended), for they are no more so than several of the parts of the living body; and I would have it that they thus live. But, perhaps, it may be said that the life of a clot is no fair evidence that definite structures will live after such a menial fashion. If so, there is the well-worn case of the dissecting aneurysm, with its false channel as good as the natural one, as far as its lining membrane is concerned; or there is the still more ancient question of the nature, true or false, of the coats of an aneurysmal sac. The largest sac we can take, and that is no mean limit, will show as irreproachable a lining membrane, even to its reproduction of disease, as the vessel from which it springs—so that, brushing aside the cobwebs of the intellectual Tarantula, it is impossible but that new coat has formed. Perhaps some may contend that it is formed by means of the legitimate blood-supply procured from the vasa vasorum. That may be allowed to be possible, but not the least of the advantages of holding such an office as this is that one becomes entitled for one short hour to an opinion, and consequently I venture to adhere to the view (not by any means a novel one), that the internal coat of the vessel or sac, as the case may be, is derived directly from the blood-stream, by what may, perhaps, be described as a natural asphalting process, the blood being asphalte, roller, and clerk of the

[2] Guy's Hospital Post-mortem Records, 1873 to 1882.

[3] "Eight times in 191 cases, of which four admit of question, being not improbably cases of granular kidney with an acute parenchymatous change superadded. Cerebral hæmorrhage is still rarer in lardaceous disease, as Dickinson notes."

works all in one. I dare not presume too much, or I should be inclined to investigate the mode of life of foreign bodies in the peritoneum and in the joints; of our natural cartilages and intervertebral substance, and even of tendon, notwithstanding the noteworthy observations of Dr. Mitchell Bruce upon its system of canals. I must, however, content myself with the statement that physiological and morbid phenomena alike appear to show that a perfectly natural tissue may not only *live*, but be the best of its kind in this easy way, while more highly strung tissues, such as muscle, give way and disappear. Therefore, I see no contradiction in the fact that in the tissues and vessels of chronic renal disease, the muscle may certainly be thick in some parts, wasted in others; or that the vessels can be recognised as well by the hyaline fibroid thickening of the coats as by the muscle.

But stronger, and, perhaps, less fanciful ground in favour of the existence of degenerative changes in this disease may be found in what no one now questions—viz., that strain or overwork leads to disease. Nay, more, bearing in mind the observations of Dr. Moxon, upon ulceration of the aorta by friction, and on the nature of atheroma, it may be said that wear and tear lead to inflammation, and if there may be a question about this in the aorta, though I do not think there can be, there can be no question whatever in the pulmonary artery, where, when we meet with atheroma, there will generally be plenty of evidence that there has been obstruction in the passage of the blood through the lungs. What is true for the larger vessels is still more so for the smaller, for inflammatory processes are certainly more luxuriant in them than in the starveling products which constitute atheroma. Hence as the direct outcome of the overwork, we might expect more or less hyper-nucleation of the coats of the arterioles, and ultimate fibrosis. This is a point of importance, very properly insisted upon by Dr. Dickinson, and I may add not only in regard to the changes attaching to chronic renal disease, but also in dealing with the question of the nature of disease in the smaller vessels.

Not only, however, do these cases of chronic parenchymatous nephritis testify to the potency of renal disease in causing hypertrophy of the heart and arteries—there are instances of granular kidney in children and adolescents which are to be traced directly to scarlatinal nephritis, and occasionally to poisoning by lead. Degenerative changes of any kind, although not unknown, are not common at these periods of existence, and it is therefore by so much the more certain that the renal disease initiates the circulatory changes. The same may be said of the occasional cases where the kidneys are spoiled by chronic obstruction to the passages; and finally, there are the experiments of Gravitz and Israel upon the lower animals, in which it has been found that an inflammation of the kidney can be produced by the temporary ligature of the renal artery on the one side, which, if the animal live long enough, is followed in course of time by contraction of the kidney, and sometimes by hypertrophy of the heart also.[4]

The arguments that have been used against the renal origin of the cardiac and vascular changes, although based upon admitted facts, are by no means conclusive; for instance, it is said that the kidney may undergo extreme degeneration without being attended by any such ulterior effects, and this is about equally true as regards the heart, as has been shown, for both forms of disease, the granular and parenchymatous. But the argument which is held to explain the same fact in relation to lardaceous disease will apply to *these* forms of renal affection also. It is only in such cases as the excretory area is disproportionately small for the body weight that the *effect* must be sought for. If the body wastes and the heart fails, the kidney may be small indeed, yet sufficient for its day, just as the chronic phthisic could not possibly have lived on had not the progressive wasting compensated the balance. It is also true that the general changes may be extreme, and the kidneys only a little granular or coarse; but this may mean much less than it appears to do, for very aberrant organs may look most meek to the naked eye. These constitute the main points adverse to the contention of Sir William Gull and Dr. Sutton in its entirety. They show conclusively that renal disease will produce hypertrophy of the heart and of the smaller arteries, and this is indeed admitted by most pathologists, of whom I will specially mention Dr. Dickinson as having as long ago as 1877 said all that one can possibly say now.

But there is another aspect of the question, and this it is which provides ground for a belief in the existence of diffused degenerative changes such as have been described. I suppose that ever since Bright's time it has been felt by all that albuminuria must often be but a rough and a late test of disease—that there are conditions preceding it which, if we could recognise them, would tell us more; and one of the earliest of my medical experiences was the work of Dr. Owen Rees in the wards at Guy's, upon the detection by tincture of galls of morbid conditions of the urine which could not be reached by the nitric acid test. That line of research has been developed of recent years by tests of greater delicacy, and we now hear talk of physiological albuminuria, peptonuria, and so on. So far as my own experience has gone, I have not met with much encouragement in the field of pre-albuminuric precipitates, and all the less because it holds out hopes of great things as regards the early detection of disease. Peptonuria and physiological albuminuria do not seem to me at present to have shed much light on anything, not even on gout or indigestion, which are ever ready to coquette with novelty; yet ideas of this kind are beginning to colour our thoughts and our practice. Only the other day I saw a lady suffering much from headache, and with a variable but often copious albuminuria of seven or eight weeks' standing to our knowledge. I need not go into the details of the case; it will suffice to say that though it was admittedly obscure, I thought that some serious organic disease of the kidney must exist. It was arranged that another opinion should be obtained, and one for which assuredly I am not wanting in respect. This resulted in the verdict that the headache was megrim (which was quite possible), and that the albuminuria was a functional one dependent upon malnutrition.

But I must not pursue this question; I have no wish to prejudge its issue; only at present its promise hangs back a little, and we have hitherto learnt more from sphygmographic observation. And it is here that Mahomed entered the field. The way being prepared by Burdon-Sanderson, he improved upon Marey's instrument, and soon settled down to an elaborate investigation of the pulse tracings of disease, and he, more than any other, has familiarised us with the characteristics of the pulse of high tension. If others have treated the subject with a more philosophic delicacy of perception of the fallacies which strew the path of this method of investigation, as perhaps they have, it was a matter of earlier training and culture, not of spirit, and he was too enthusiastic to be self contained. I say this intentionally, because looking back upon the history of the sphygmograph, if it can be said as yet to have a history, I doubt whether the observations of Mahomed have received quite their due meed of estimation. Yet his was the work which kept the subject going, and of which our present knowledge is in great part the development. If I were to choose from Mahomed's many papers that which has always seemed to me the most valuable, I should select one published in the Transactions of the Royal Medical and Chirurgical Society for 1874,[5] on the pre-albuminuric stage of Bright's disease. It bears directly upon the present part of our subject. In it was shown precisely that morbid conditions of the pulse (high tension) precede any evidence of disease in the kidney; and he drawa the conclusion from a number of observations that the vascular condition is the cause of the albuminuria, and not the converse, as had been generally supposed. His observations and conclusions seem to be particularly worthy of credence, because they no more than state in terms of greater precision what had long been known. There was nothing new in the knowledge that the pulse is hard under certain circumstances—let the early and long day of venesection attest that. There is no novelty in the assertion that careful purgation is the best means of preventing or combating the onset of scarlatinal dropsy—let the sheet anchor of the treatment of Bright's disease attest that. The sphygmograph but told us, in one sense, what we knew before; but it told its tale with a graphic interest which had much of the merit of a new discovery. It did not educate the finger, but it reduced the composite of the impressions derived from touch.

This account of high tension, demonstrated by the sphyg-

[4] In looking over our post-mortem record for the purposes of this lecture I have noted one case of one-sided disease, the other kidney being only hypertrophied in which the heart was enlarged. Dr. Galabin had previously noted two others in earlier years, and there are several in which one kidney having been long destroyed or substantially crippled, the other having undergone inflammatory changes in addition to the hypertrophy, characteristic disturbances have followed.

[5] On the Etiology of Bright's Disease and the Pre-albuminuric Stage.

mograph, but not unknown before, leans obviously towards the hypothesis advanced and supported by Dr. Walshe[6] as early as 1849, that Bright's disease is not renal, but primarily a blood disease. It is fair to suppose that the blood is under such conditions as those of acute gout, lead poisoning, blood poisoning of some other kinds, some states of anæmia, and so on, in a condition which renders it repulsive to the tissues, and that the kidney only suffers in common with the other members. And it is quite possible—nay, there are grounds for believing—that under circumstances which apply to, and are imposed upon all, it may suffer more than the rest by reason of some disability inherent in its anatomical structure, for example; or an undue readiness of its glandular elements to undergo degenerative changes; or a disproportionate activity of function—for it is hardly to be supposed that there is no maid-of-all-work in a household so economically conducted as ours. At any rate, it is well known that diseased conditions of the kidney—of the epithelium chiefly, but not only—are common enough in the post-mortem room in all sorts of cases, which could not by any means be primarily renal; and such changes are probably far more common than allied ones in the liver. The greater frequency of the occurrence of lardaceous disease in the kidney might also be an instance in point. It must, however, be said that the apparent precedence of high tension does not necessarily carry the conclusion that the kidney follows the lead of the blood. It may still be that the excess of tension is compassed, if not by albuminuria, yet by some milder form of renal inadequacy, to adopt Sir Andrew Clark's happy, if somewhat gossamer term, as the initial fault. The pathologist has no right to be contemptuous of function. It cannot be but that it sometimes fails first; it cannot be but that it *often* fails before any appreciable structural change is manifest. So that in scarlatina, gout, and such-like conditions, it may so be that the tension is responsive to the visceral failure. But if this importance attach to function, as it surely must, it may be contended on the other hand that it supports the probability of the production of an arterio-capillary fibrosis by means other than renal defect. Can it be, with other excretory organs of probably no less importance—viz., the skin, the liver, and the intestine, that the kidney monopolises the power of thus rendering the blood distasteful to the tissues? Surely some of the many disorders of a huge viscus like the liver must be efficient, even if gout be discredited for being a trimmer; and it is possible enough, it is probable enough from the clinical side of the case, that certain morbid states of the nervous system, "worry," for example, when expressed in terms of nervous action, by their influence on the peripheral circulation, will bring about the same result. Indeed, Dr. Clifford Allbutt, in one of his many attractive and suggestive papers, has taken up this very question, and has narrated cases, if I mistake not, of granular kidney which have seemed to date their origin from prolonged anxiety; and Dr. Broadbent has alluded[7] to the increase of tension that may be observed in states of nervous excitement in hysteria and other diseases of brain and spinal cord.

A good deal has sometimes been made of the occurrence of a general arterial disease with hypertrophy of the heart, without renal disease, in young people, but it is very exceptional. More common, but still rare, is the same combination in older people. Of the former class I cannot say that I have seen a single example, although for twelve years I have been on the look out in our post-mortem room; of the latter I can count fourteen in the ten years collated. But I must say, that holding as I do to the probability of the existence of a general arterio-capillary fibrosis, I am for ever wondering at the small amount of tangible evidence that is to be obtained from the deadhouse. As a matter of practice, a thick sodden appearance of the arteries but rarely points wrongly to chronic renal disease. Some years ago MM. Bouchard and Charcot published some observations[8] upon the dependence of cerebral hæmorrhage upon the presence of miliary aneurysms on the cerebral arteries. Heschl, Meynert, Bastian, Douglas Powell, and Charlewood Turner have since then met with a similar condition. MM. Bouchard and Charcot consider the disease to be a sclerosis of the outer coat of the vessels leading to atrophy of the muscular coat, and thence to weakening of the walls and aneurysm. One cannot but suppose that here is the same change as that described by Sir W. Gull and Dr. Sutton, to the accuracy of whose observations independent testimony is thus afforded. They also contend for the special nature of the disease, although they would confine the sphere of its action to the vessels of the brain; but this lands us in a dilemma, for, on the one hand, it would seem to traverse the observations, too numerous to admit of the least doubt that renal disease is the common associate of apoplexy (sixty-three cases are given, a large proportion of which must have been, and obviously were, accompanied by renal disease and hypertrophy of the heart); and, on the other, if it be, as it must be, the change with which we have been so much occupied, it cannot be simply local, since so many other observers unite in saying that it is a generalised one, even though they differ as to the nature of the precise change.

But scant time remains to allude to what is, perhaps, the strongest evidence in favour of the generalised nature of the changes which include chronic Bright's disease. It is referred to by Walshe; Sir William Gull and Dr. Sutton depend much upon it; and it forms the subject of some of Mahomed's latest work in a paper on Chronic Bright's Disease without Albuminuria.[9] I may say that I reject such a nomenclature as this. Bright's disease, if it means anything, means nephritis; and if it be true that it is but a part of a much larger subject, some more expansive title—arterio-capillary fibrosis for instance—must be found to incorporate it. It is certainly a remarkable fact in the disease, if, being an affection of one organ, it should so frequently present symptoms apparently so remote that it is not difficult to overlook the primary disease altogether. There is no doubt that urine is for long free from albumen in some of these cases (although I think myself that that feature has been rather strained); and perhaps the only tangible abnormality pointing to the kidney will be the low specific gravity of the fluid. Some die of apoplexy, some of asthma, some of cardiac failure, some of pneumonia. Of 100 cases given by Mahomed,[10] seventy-four presented the symptoms of diseases other than renal. I will also make us of another fact, which seems to me to point in the same direction—it is the great frequency of granular changes in the kidney in the post-mortem room. There have been as many as 70 cases in one year out of a total of 490, or in a seventh of all the cases, and 463 cases in ten years; a number doubtless under the mark, as the slighter degrees are so common as sometimes to escape attention. This does, I think, tend to confirm the suggestion I have already put forward, that the life-history of the kidney is one of early senility, and that it runs in this respect with baldness, grey hair, and the atheromatous aorta, any of which *may* be the symptoms of essential disease, but which are more often milestones; and milestones, happily, with their faces blurred.

I had intended to have taken up, more fully than I can do now, another and somewhat neglected aspect of my subject: the frequency and practical importance of the effects of pulmonary arterial tension. I am, of course, well aware of Dr. George Johnson's work, in this direction *also;* and some of my hearers must have listened to or read his Lumleian lectures delivered here in 1877. But my own attention was called to it more particularly by a case that came under the care of Dr. Moxon, in Guy's Hospital, two or three years ago, and which for some time was under my own observation. It must suffice to say of it that the only symptom of much obtrusiveness was a peculiar bruit in the pulmonary area, which upon the whole we thought not unlikely to be due to an aortic aneurysm, with possibly some communication with the pulmonary artery. It eventually proved to be an enormous dilatation of the pulmonary artery dependent upon a fibroid state of lung. The preparation is on the table before you. Since then I have been surprised at the frequency with which dilatation of the pulmonary artery, not of course always in this excess, has come under my notice. Now every case of chronic bronchitis and of mitral disease are more or less cases of pulmonary tension, and the indications of its presence in the alteration of the character of the second sound are to be found in every text-book. To such cases I am not alluding, but to a pathological and clinical extension of the subject, which on both sides requires development.

[6] Bright's disease not essentially a renal disease, but essentially and primarily a blood disease. (THE LANCET, 1849, vol. ii., p. 29.)
[7] On the Causes and Consequences of undue Arterial Tension. (British Medical Journal, vol. ii., 1883, p. 357.)
[8] Nouvelles Recherches sur la Pathogénie de l'Hæmorrhagie Cérébrale. (Archives de Physiologie, 1868.)
[9] Guy's Hospital Reports, series iii., vol. xxv.
[10] The Clinical Aspects of Chronic Bright's Disease. (Guy's Hospital Reports, series iii., vol. xxiv.)

Those of us who have been in the way of making numerous inspections will, I think, assent when I say that every now and then a puzzling case of this kind is met with; the symptoms during life have been those of severe bronchitis and emphysema, and yet the bronchial tubes are practically dry, and the emphysema, if it cannot be said not to exist, is at any rate, not more demonstrably present than the fatty heart, which is so often made to satisfy the unenlightened conscience of a coroner's jury. But the pulmonary artery is dilated and perhaps atheromatous. It is difficult to say what the origin of these cases is; I only know that the lung has sometimes seemed practically sound, and I have been in the habit of explaining them by supposing that if some of us are born with large hearts, others are born with little ones, and some in like manner are provided at the outset with lungs which are inadequate to their requirements. But, however this may be, something has happened which has left the lung comparatively sound, and made dilatation of the pulmonary artery the main disease.

It has often happened to me in the post-mortem room to have to ask the question—in many cases, alas! without answering it—Which has been the more to blame, hypertrophy or dilatation of the heart and arteries? It is indeed impossible to mete out the relative share of each in a given result. But it is quite clear that the relative effects of the two cannot be unimportant. Extensive dilatation, for instance, of any of the cavities of the heart, while on the whole lethal, certainly has some compensatory aspects; while extreme hypertrophy, on the whole conservative and protective, as certainly hurries some lives on to a catastrophe. But in this instance observation tends to exalt the importance of dilatation, and I may remind you that there is post-mortem evidence that even in so common an ailment as anæmia the pulmonary artery may undergo dilatation (Russell and Bramwell).[11] I think, then, it is fair to conclude that the pulmonary artery sometimes dilates under certain transient conditions of pulmonary disturbance, and afterwards remains so permanently as the substantive disease.

I can only add that the clinical importance of these cases is neither small nor uninteresting. There is no need to intrude upon you the well-worn discussion of the nature of the hæmic murmur, but you will see that the ready dilatation of the pulmonary artery, if it be a fact, revitalises this question, and gives it fresh prominence and purpose.

This, thus hastily sketched, is the subject, such are the scenes, which occupied one of the hours of Mahomed's short but busy day. I know that they possess far more importance for some minds than for others. Some of us never think in terms of arterial tension at the bedside. With some it is descent; with some the wear and tear of life; with some nervous action; with some blood; with some our environment lit by Professor Tyndall's beam that forms the more suggestive pose of the mobile Study, whose servants we in common are, but whose masters we, reverently all, might wish to be. Each of us has his ruling idea which lights his path and guides his hands in ways innumerably helpful, but unknown to any save himself. Yet though we must in this sense be negative to lines of thought not obviously in harmony with our own, we can always gauge their value justly by studying that line which best serves *us*.

It was said in my hearing the other day by one who, saying it, made it well worth the saying, that he did not feel altogether satisfied with his life's work. It was not enough for him to have been in the van of scientific medicine, he would have liked to have been able to say, "This is my discovery." In more general way I have sometimes thought that medicine is less happy than painting or sculpture, which can have all a life's work visibly before it, and point with satisfaction to its numerous creations. There is something in the idea, but it wants in depth. One may be well content to have been in the van—it is a truer evidence of worth than the one discovery. Wherever I go I hear of Addison spoken of by his pupils, not as the discoverer of a disease, but as a master teacher whose hold still bends them to an almost reverential admiration. I hear of Bright, not so much as a name attaching to a disease, but as that of a man whose observations are worth attention whatever they relate to. I hear of Latham and of Murchison in like manner—we shall hear of those we may not mention in their presence. Such as these influence their fellows by a power quite independent of their additions to our knowledge.

Mahomed's name will not live upon discovery; dying unfortunately so young, it would be but a flimsy conceit of the hour to suppose that it will live in any sense beyond the lives of his own friends and the precincts of his school. Progress is as relentless as death, and although it is a glorious resurrection, it is none the less a grave. Even the gentle Emerson says: "What care we who sung this or that? it is we at last who sing." All the more, then, may we dwell upon a name to-day which, could one depict on canvas or in the history of scientific medicine the individual elements in the wave of progress, during the last ten years, whether by the work itself, by the stimulus to thought which that work has proved, or by the ζωη of personal contact, would certainly be largely represented.

Only this more. Pardon the personal tribute:

> "Then notes came pouring through the wicker bars,
> Climbed half a rapid arc of song, and stopped.
> * * * * * I turned and passed along:
> But Time and Death, Eternity and Change,
> Talked with me ever, and the climbing song
> Rose in my hearing, beautiful and strange."

[11] Bramwell on Diseases the Heart, p. 197.

ON THE

OVA OF MAN AND THE MAMMIFERA BEFORE AND AFTER FECUNDATION.

HISTORICAL NOTICE OF THE DISCOVERY OF THE GERMINAL VESICLE OF THE MAMMIFEROUS OVARIAN OVUM, AND OF THE RECOGNITION OF A SUPERADDED INVESTMENT AROUND THE OVUM OF THE RABBIT AS IT PRESENTS ITSELF IN THE FALLOPIAN TUBE AFTER IMPREGNATION: A SINGLE-HANDED STRUGGLE AGAINST THE WHOLE SO-CALLED "SCIENTIFIC WORLD" OF LONDON FIFTY YEARS AGO.

Dedicated to the Scientific World of the Present Day.

BY T. WHARTON JONES, F.R.C.S., F.R.S.

(*Concluded from page 284.*)

Recognition as a superaddition to the ovarian ovum of the exterior investment around ova in the Fallopian tube of the rabbit after fecundation, constituting the basis of a chorion.—Von Baer was the first who, with a knowledge of the ovarian ovum of the mammifera, found ova in the Fallopian tubes. This was in a bitch. He did not observe any investment around them additional to that presented by ova while still in the ovary. As the next observer in order of time to Baer, with a knowledge of the ovarian ovum, I described ova found in the Fallopian tubes of the rabbit after impregnation, and showed that they possessed an additional investment.[1] Baer represented the thick external membrane of the ovarian ovum (zona pellucida) as still constituting the external membrane of the ova which he found in the Fallopian tubes of the bitch. And Bischoff (writing in 1838) says: "It is quite certain that the ovum receives no new external investment in the tube; it acquires no albuminous layer and cortical membrane like the ova of the ovipara; and I can therefore state positively that the outer covering of the ovarian ovum also remains the outer covering in the Fallopian tube. Wharton Jones," continues Bischoff, "the only person who pretends to have observed this formation of albumen and cortical membrane around the ovum was probably deceived by the *discus*. He has either not been sufficiently acquainted with it from the ovary onwards, or no longer expected it in the fecundated ovum, and has taken its granules for the albuminous layer around it."[2] Dr. Barry (writing in 1838 also) not less positively, though in an indirect manner, contradicts my observation, inasmuch as he speaks of the thick external membrane of the ovarian ovum (zona pellucida) as continuing in the tubes and uterus still the external membrane. My observation, thus so decidedly contradicted, directly by Bischoff, indirectly by Barry, was that in a rabbit three days post coitum I found in the Fallopian tubes, near where they enter the horn of the uterus, ova differing very remarkably from ova as they exist in the ovaries before impregnation, inasmuch as they each presented, in addition to the component parts of the

[1] On the First Changes in the Ova of the Mammifera in consequence of Impregnation, and on the Mode of Origin of the Chorion. (Philosophical Transactions, part ii., for 1837.)

[2] Wagner's Physiology, Leipzig, 1838, p. 96, sect. 69; Willis's Translation, London, 1841, p. 141.

ovarian ovum, a thick gelatinous-looking investment resembling that which is observed around the ovum of the frog in the oviduct. This investment I indicated as the future chorion. When Bischoff wrote the denial above quoted, his observations, like those of von Baer, had been confined to dogs. Observations subsequently made on rabbits satisfied him "that the ovum of the rabbit, like that of many ovipara, becomes surrounded in its progress along the Fallopian tube with a layer of albumen." Barry's subsequent observations also convinced him that on the ovum in the Fallopian tube "an outer membrane becomes visible, first as a dark circle around the thick transparent membrane (zona pellucida), then, by the imbibition of a fluid having *no small consistence*, it becomes distended and thus separated from the the thick external membrane, so that the latter now appears as if surrounded by a gelatinous-looking substance." The existence of an additional investment around the ovum of the rabbit in the Fallopian tube post coitum thus came to be admitted, and that by persons who had decidedly denied the accuracy of my observation. Whilst Bischoff held with me that the additional investment is a thick gelatinous-like substance throughout, Barry erroneously supposed it to be a fine membrane enclosing a fluid. The acknowledgment of my discovery of the fact was not, however, ingenuously made. Barry, in defiance of my figure, which he must have recognised as a drawing from nature, represented that my discovery was not an observed fact, but merely an inference on my part from what is seen in the case of the ovum of the frog, for example, appropriated the fact as of his own discovery, and attacked Bischoff for refuting his erroneous allegation that the additional investment in question is a fine membrane enclosing a fluid having "no small consistence." Bischoff, again, having correctly exposed Barry's mistake, magnanimously clinched his argument by saying, "Wharton Jones agrees with me"! Critically speaking, it would have been more in conformity with the logic of truth if Bischoff had said, "I now agree with Wharton Jones." But let that pass. In denying the accuracy of my observation, Bischoff's error consisted merely in applying too hastily to the rabbit the negative results of his researches in the dog. Barry's error, on the contrary, was due to positively inaccurate observation, inasmuch as rabbits were the subjects of his researches.

In my report on the Ovum of Man and the Mammifera before and after Fecundation in the *British and Foreign Medical Review* for Oct. 1843, pp. 513-557, I say in a note at page 530: "It is to be remarked that Cruikshank must have observed the investment in question. It, in fact, appears to be what he designated chorion; but the author of this report was the first who, with a knowledge of the ovarian ovum, discovered it and recognised it as a superaddition to that body, and indicated it as the basis of the future chorion." To this I have to add that Cruikshank wrote towards the end of the last century. The subsequent observations of Prevost and Dumas, made in the early part of the present century, was similar to that of Cruikshank; but these observers knew nothing of the ovarian ovum any more than Cruikshank did.

Comments on the reception given to my crucial facts and Dr. Martin Barry's extravagances as above related.—The repulsive duty now devolves on me to comment on the virtual suppression by the Royal Society of London for *promoting* Natural Knowledge of my paper on the discovery of the germinal vesicle of the mammiferous ovarian ovum and of the true signification of the zona pellucida as a vitellary membrane, whereby the real homologies of the mammiferous ovum were demonstrated; whilst, soon after, currency was given by their name and authority to the blunderings and extravagances of Dr. Martin Barry. The reason alleged why my paper in question was not honoured with a place in the Philosophical Transactions was because the trusted scientific advisers of the Royal Society, of whom Mr. Owen was one, could not tell whether my discoveries were right or wrong.[3] I was not myself in London at the time, but being there not long after, I demonstrated the facts,[4] and contributed a second paper on my discovery in the rabbit of the superaddition, post coitum, of the future chorion above noticed, on the understanding that both papers should find a place in the Philosophical Transactions. I then left London on a visit to Germany, but during my absence, however, the second paper alone appeared therein. It was subsequently to this that the late Dr. Martin Barry contributed his *celebrated* papers to the Royal Society, which, their blunderings and extravagances notwithstanding, not only found a place at once in the Philosophical Transactions, but were honoured by the Royal Society's award of a Royal medal. It is to be presumed from this decisive action that the *trusted authorities* of the Royal Society, with Mr. (now Sir Richard) Owen at their head, considered themselves better qualified to judge than they were shortly before, when they could not make up their minds as to whether my discovery of the germinal vesicle and indication of the true significance of the zona pellucida were right or wrong, and so gave me the disadvantage of their doubt. How far they proved themselves positively more ignorant and incapable than before may, however, be inferred from what has been above related. Of course I may not suppose that there was any intention to slander my paper, by setting up Dr. Barry's against it, on the part of the Royal Society, so as by an unfounded implication to justify their action of having excluded it. Dr. Martin Barry, thus backed by the name and authority of the Royal Society for *promoting* Natural Knowledge, came to be looked on as the paragon of physiological observers, and the pages of the Philosophical Transactions were virtually placed at his disposal as a receptacle into which he might pour, *ad libitum*, the contents of his note-book. Accordingly, thinking himself somebody, he began, vaingloriously, to deal damnation all round against other observers in the same field of research, notably against Professor Bischoff and myself. I found it obligatory, therefore, to retaliate in self-defence, and in papers in the *London Medical Gazette*, vol. xxiv., 1839, exposed Dr. Barry's blunderings. Encouraged by *claqueurs* and ignorant pretenders—nay, tacitly by some who, though pretentious enough, were not so ignorant but that they knew better,—Dr. Barry, nevertheless, still went on swimmingly, publishing in the Philosophical Transactions one absurdity after another, which in this country were vaunted each as "a new discovery by Dr. Martin Barry." Notwithstanding this, I at last succeeded in destroying Dr. Barry's false prestige and shaming his deluded abettors into shyness of his pretensions; though after the manner of a dogged schoolboy, they evinced little disposition to try to make themselves better acquainted with the facts of the case. They only subsided into silence. In Germany Dr. Barry's pretensions had come to be seen through, and it was observed there that his researches must have been made with a *laterna magica* rather than a microscope

Here I may mention that the unworthy *ignoratio elenchi* argument, of falsely attributing to your antagonist some statement which he had never made for the purposes of *valiantly* refuting it, has not unfrequently been brought to bear against me. In defence of myself from such an attack by Dr. Martin Barry, I published a statement in September, 1839, from which the following is an extract:—"Dr. Barry's pertinacity in the attempt to fix upon me a charge of disingenuousness and want of candour towards Professors Valentin and Wagner is the only reason that induces me to notice his last communication. He says, after mentioning the date of publication of the observations on the ova of the mammifera by the above-mentioned gentlemen, 'Yet T. Wharton Jones claims the priority of discovery of both vesicle and spot—a claim which the dates above stated satisfactorily refute.' This is a pure invention on the part of Dr. Barry. I am not aware that anything I ever wrote or said can be construed into such a meaning. It is a very

[3] The paper, which was communicated by the late eminent professor, John Burns of Glasgow, a Fellow of the Royal Society, in time to be read, was held back until the last meeting of the session of the Society, when its title only could be announced.

[4] I had previously (February, 1835) demonstrated the facts to the late Dr. Sharpey (then of Edinburgh), and given him my paper to read. In returning the paper, Dr. Sharpey wrote me a letter of congratulation on my discovery; but when he subsequently became a denizen of the "scientific world" of London, he seemed to have forgotten all about it. The "scientific world" of London was an expression used by Dr. Sharpey himself in a letter to the late Sir James Simpson, libelling the late Dr. Robert Lee. This libellous letter happened to be published in the life of Sir James Simpson, to the consternation of both Dr. Sharpey and the publisher. Dr. Sharpey wrote a deprecatory apology to Dr. Lee; and the publisher, besides apologising, expunged the letter from the book. The letter in question was written to tell Sir James Simpson, who had been active in the affair, of the accomplishment of the unworthy intrigue against Dr. Lee, by the award of a Royal medal at the Royal Society to Dr. Thomas Snow Beck, whose dissections of the nerves of the uterus, the "scientific world" had brought forward as a set off, *per fas aut nefas*, against those of Dr. Lee. (See Report of the Proceedings of the special general meeting of the Royal Society on the subject, THE LANCET, vol. i. for 1847, p. 191.)

different thing to claim having made an observation independently and about the same time that a similar observation was made in another country, from claiming priority of discovery. Therefore, whilst I never disputed the claims of Valentin and Wagner, and fully admit the correctness of Dr. Barry's dates—viz., that Valentin and Bernhardt's memoir was published in Germany in October, 1834, and that Wagner's observation regarding the germinal spot was announced in Müller's *Archiv* for 1835, but with a note by the editor saying that the paper had been received in 1834; whilst, I say, I fully admit all this, it does not the less remain a fact that I, without any knowledge of M. Coste's observations, did, independently and by the mere dint of my own study and dissection of the mammiferous ovum under the microscope, discover both the germinal vesicle and the spot on its side in the beginning of September, 1834. From these dates, then, it appears that my observations were made one month before Valentin and Bernhardt's memoir was published. In regard to Wagner, I am more nearly equal with him, as, though his observations were made in 1834, they were not published till 1835. Mine, also, though made in 1834, were not formally published till 1835." From the quotation previously given it will have been seen that Professor Bischoff subsequently endorsed my right to all that I here claimed.

To conclude. Akin to an *ignoratio elenchi* is "robbing Peter to pay Paul"—an inadvertence something like which is exemplified in the following correspondence that recently took place:—

"*To the President and Council of the Royal Society of London for promoting Natural Knowledge. (A statement by* T. WHARTON JONES, F.R.S.)

"In the obituary notice of the late Baptiste André Dumas, at pp. xiii. and xiv. of the Proceedings of the Royal Society, No. 233, just issued, it is said that 'Prevost and Dumas must thus be looked upon as the precursors of C. E. Baer, whose classical researches on the Genesis of the Ovum in the Mammalia and in Man appeared in 1827.'

"Herein is manifested, on the part of the writer of these words, a total misapprehension of the cardinal point in the history of Baer's discovery of the ovarian ovum of the mammifera. Prevost and Dumas knew nothing of the ovarian ovum, and were no precursors of von Baer. Their observation was limited to the ovum, as found post coitum in the Fallopian tube; but in this they had been anticipated long before by Cruikshank. Cruikshank wrote (in the Philosophical Transactions, if I remember right) towards the end of last century. In my 'Report on the Ovum of Man and the Mammifera before and after Fecundation' in the *British and Foreign Medical Review* for October, 1843, I say at page 530, in speaking of the chorion: 'It is to be remarked that Cruikshank must have observed the investment in question. It, in fact, appears to be what he designated chorion; but the author of this report was the first who, with a knowledge of the ovarian ovum, discovered it in the rabbit, and recognised it as a superaddition post coitum round the ovarian ovum as it exists ante coitum, and indicated it as the basis of the future chorion.'

"When Mr. President of the Royal Society was a pupil of my class at Charing-cross Hospital, about forty years ago, he was taught the facts now here related, and nearly fifty years ago I communicated the same facts to the Royal Society. I was, indeed, the first to call the attention of the Royal Society to the subject of the ovarian ovum of man and the mammifera and its true homologies ante coitum, as well as my discovery of the superaddition of the chorion post coitum. As the claim put forward for Prevost and Dumas 'to be looked on as precursors of Carl Ernst von Baer in the discovery of the ovarian ovum in the mammifera' is an injustice, not only to Baer, but also to Prevost and Dumas themselves, and is derogatory to the honour of the Royal Society, I beg to suggest that the erroneous and unjust statement to which I have here drawn the attention of the President and Council of the Royal Society be cancelled, and a true statement of the case substituted. As one of the oldest Fellows of the Royal Society, and as he who first called attention to the true homologies of the ovum of man and the mammifera, I feel, notwithstanding the small observance my crucial discoveries received from the Royal Society, that I may, with authority, make this suggestion.

"T. WHARTON JONES, F.R.S.

"Ventnor, Isle of Wight, Dec. 9th, 1884."

Reply to this from the President and Council of the Royal Society, through the Physiological Secretary.

"The Royal Society, Burlington House,
"London, W., Jan 12th, 1885.

"DEAR SIR,—In reply to your letter of Dec. 9th, I am directed to observe that the obituary notices in the Proceedings are not communications made to the Society, and that the Society is not responsible for them,[5] as it is for the communications published in the Transactions or the Proceedings. The obituary notices are kindly furnished at the request of the President by Fellows who are individually responsible for the statements which they make. I am further to call your attention to the fact that the writer of the obituary notice of Dumas is a chemist, Professor A. W. Hoffmann of Berlin, and that the notice is written chiefly from a chemical point of view, and that the passage to which you take exception seems intended to mean, not that Prevost and Dumas were precursors of von Baer in the discovery of the mammalian ovarian ovum, but that they were his precursors in so far as they discovered the mammalian ovum in the maternal passages. Had the writer of the notice found it necessary to go into such detail as to mention Cruikshank in this connexion, it would have been his duty to have mentioned De Graaf also. Yours truly,

"M. FOSTER, Sec. R.S.

"To Professor T. Wharton Jones, F.R.S., &c."

"*To the President and Council of the Royal Society for promoting Natural Knowledge. (A rejoinder to the reply from the Physiological Secretary, by* T. WHARTON JONES, F.R.S.)

"The gist of my 'statement' to the President and Council of the Royal Society *re* the obituary notice of the late M. Baptiste André Dumas, in the Proceedings, No. 233, pp. xiii., xiv., was to suggest that the unfounded allegation that MM. Prevost and Dumas must be looked upon as the precursors of Carl Ernst von Baer in the discovery of the ovarian ovum of the mammifera should be cancelled, and a true account of what Prevost and Dumas actually did substituted for it. By Dr. Foster's official reply, I am informed that the President and Council of the Royal Society repudiate all responsibility in the matter, and decline to correct the *historical* misrepresentation. Here, therefore, it would have become me to say nothing more on the point, but Dr. Foster, as Physiological Secretary, has volunteered in his letter a physiological argument thereon, to the effect that the passage in the obituary notice to which my exception is taken implies, not that MM. Prevost and Dumas were precursors of von Baer in the discovery of the ovarian ovum of the mammifera, but only that they were precursors of von Baer in so far as they found ova in the maternal passages of rabbits post coitum. This gloss I cannot accept, even if it had been a fact that MM. Prevost and Dumas were the first to discover ova in the maternal passages of a mammal post coitum. Herein, I must say that Dr. Foster, in expressing himself thus, betrays an imperfect comprehension of the subject, inasmuch as he ignores the crucial bearings of a knowledge of the mammalian ovum as it exists in the ovary before fecundation on the interpretation of its homologies—a cardinal point in embryology—so cardinal a point that I commence my 'Report on the Ovum of Man and the Mammifera before and after Fecundation,' published in the *British and Foreign Medical Review* for October, 1843, in the following words: 'Inasmuch as without a knowledge of the ovum before fecundation it is not possible to trace the first stages in its subsequent development, so the discovery of the ovum of the mammifera in the ovary must be viewed as the first great step towards the elucidation of generation and development in that class of animals.' As Prevost and Dumas knew nothing of the ovarian ovum, their observation was of comparatively small import. Von Baer, it is to be particularly insisted on, was the first who, with a knowledge of the ovum of the mammifera as it exists in the ovary before fecundation, examined an ovum found in the Fallopian tube post coitum; but this observation by von Baer was made in a bitch, in which, as it appears, no chorion investment presents itself around ova in the Fallopian tube post coitum. My paper in the Philosophical Transactions for 1837 contains the first description and

[5] This being the case, I am happy to believe that for the disingenuousness by *suppressio* and *suggestio* which pervaded the obituary notice the late Dr. Martin Barry in the Proceedings about thirty years some nameless individual only was responsible.

delineation of an ovum from the Fallopian tube of a rabbit post coitum ever given by anyone possessing a knowledge of the mammalian ovum as it exists in the ovary ante coitum. This ovum, I pointed out, consisted of an ovum such as exists in the ovary, together with an additional investment around it, constituting the foundation of a chorion. To a true embryologist, this observation implies a very different thing from Dr. Foster's gloss in regard to the observation of Prevost and Dumas.

"T. WHARTON JONES.

"Ventnor, Isle of Wight, February 2nd, 1885.

"*Postscript.*—In the treatise on Physiology by Professor Landois, of Greifswald, there is a somewhat similar instance of generosity to Paul at the expense of Peter. Ignorant not only of the true fact as observable in nature, but also of the literature of the subject, the German professor, improving on his countryman Schiff, but, if anything, falling short of the improvement on that gentleman's discovery in the rabbit's ear by Mr. Savory, President designate of the Royal College of Surgeons of London,[6] asserts that 'the veins of the bat's wing *pulsate*,' and that the author of the discovery of this alleged phenomenon was Dr. Schiff; whilst Professor Stirling, of Aberdeen, the English translator of the German book, with all the confidence of ignorance, loudly echoes the misrepresentation of the German blunderer.[7] Reference to this perversion of the fact in nature and questionable generosity to Paul would have been more appropriately made in my article in THE LANCET (January, 1885), on the history of the 'discovery that the veins of the bat's wing, which are furnished with valves, are endowed with heart-like rhythmical contractility,' than here, but Landois' Physiology had not then come under my notice. Again, with equal ignorance of another fact in nature and of the literature bearing on it, Professor Landois says: 'Some animals have accessory hearts—*e.g.*, the eel, in its caudal vein. They are very probably lymph hearts (Robin).' This vague utterance of the German professor is allowed to pass without note or comment by the English translator, though, if I am not mistaken, he is the gentleman of the name of Stirling to whom I once sent, through a near relative of his own, a copy of my paper from the Philosophical Transactions, 1868, p. 675, entitled 'The Caudal Heart of the Eel, a Lymphatic Heart,' in which are described the peculiar phenomena attending the propulsion of lymph from it into the caudal vein, the true nature of which phenomena DR. Marshall Hall, who discovered the heart, had failed to detect, and so mistook the organ for an auxiliary blood heart."

NOTES FROM A BACTERIOLOGICAL LABORATORY.

BY EDGAR M. CROOKSHANK, M.B. LOND.

WHILE working during the past months in the laboratory of Professor Johne at Dresden, I have encountered several experiences which will be of especial interest to those engaged in bacteriological researches, though, at the same time, no medical man can fail to be interested in any researches which are daily bringing fresh facts to light, and are assisting us in gaining a knowledge of the life-history of micro-organisms and in unravelling the connexion between micro-parasites and disease. The laboratory to which I have referred is a very small one, but is to be replaced before long by a new building, the plans of which are already in hand. In spite of its insignificant appearance, however, its memory will always be connected with many classical researches which have thrown light upon the etiology of actinomycosis, tuberculosis, and other pathological problems.

While studying the effect of the subcutaneous inoculation of soil in mice, I produced in one case most virulent anthrax. The characteristic appearance of the bacilli themselves, of their colonies on plate-cultures, and of their growth in tube-cultivations, left no doubt as to the nature of the infection. It subsequently transpired that the soil with which this mouse had been inoculated had been removed from a spot which up to nine years ago had been the burial-ground of bodies of animals the victims of anthrax at the Royal Veterinary College. The extraordinary vitality of anthrax spores is well known, and Professor Sternberg relates an equally interesting experience. Professor Sternberg, in America, received from Professor Burdon Sanderson a tube containing anthrax material seven or eight years old. Professor Sanderson wrote that, if it was worked up with salt solution and injected into a mouse, the spleen—after from twenty-six to thirty-six hours—would be enlarged and infiltrated with bacillus. This prediction, says Dr. Sternberg, was fulfilled to the letter. The little tube only contained a fraction of a grain of dried blood, which, when rubbed up with the salt solution and injected as directed, caused the death of a mouse in less than thirty-six hours. With the spleen-pulp (of the mouse inoculated with garden earth) a second mouse was inoculated, which had two days previously been infected with micrococcus tetragenus. This mouse died the following day, and sections of the organs, spleen, lung, kidney, &c., produced the most exquisite example of a *double infection*. Not only were the vessels injected with anthrax bacilli, but groups of the characteristic giant micrococci were found in the organs mentioned. The method employed was to harden the organs in absolute alcohol, embed in celloidin, and cut with Jung's microtome. The sections so obtained were received into absolute alcohol and then stained by the method of Gram. It is very instructive to examine these sections without further staining, by treating in the usual way with clove oil, transferring to a clean slide, drying with four folds of filter-paper, and preserving in Canada balsam dissolved in xylol. Double and triple colouration may be produced in other sections by treating them after the process of decolourisation with eosin, picrocarminate of ammonia, or Orth's solution. In either of the latter methods the carmin has a selective affinity for the nuclei, and therefore a complete demonstration of the tissue-structure as well as of the bacilli is obtained. A more rapid way of producing a similar result was obtained by immersing the sections for a minute or two in concentrated aqueous solution of gentian-violet, washing out in absolute alcohol, and then transferring for two or three minutes to Orth's solution (picrolithium carmine), rinsing in acidulated alcohol, treating with concentrated alcoholic solution of picric acid two or three minutes, clearing in clove oil, and mounting in Canada balsam. Sections prepared some months ago with Orth's solution in this way, and in combination with the method of Gram, have shown no colour deterioration or tendency to fade. The tube cultivations obtained by inoculating "nutrient gelatine" and "agar-agar" with blood from the heart and spleen were also perfectly characteristic. A viscous snow-white plaque forms upon an oblique surface of agar-agar. As the *typical* appearances in nutrient gelatine have been so erroneously described in recent mycological literature in England, I will describe in detail my own experiences. I have carefully examined over one hundred cultivations in gelatine peptone broth which I had inoculated with blood from the heart, spleen, and other sources, of mice, guinea-pigs, rabbits, and sheep, which had been inoculated with the bacillus. If "gelatine tubes" of different strengths are prepared, each tube being inoculated once, and once only, with the platinum needle, the typical appearances which are difficult to obtain will nevertheless appear in some, and may be more easily distinguished with a magnifying-glass. It will then be observed that extremely fine filaments spread outwards from the needle track, while sometimes a little isolated spot sends out rays in all directions like the silky filaments of thistle-down (Fig. 1). As soon as liquefaction of the gelatine progresses these appearances rapidly disappear, and the growth subsides as a white flocculent mass. No one who has once seen a pure typical cultivation of the bacillus can possibly mistake it, while others who have not done so must of course not mistake contamination of a tube with penicillium glaucum or a tube culture of a bacillus I am about to describe.

In studying the micro-organisms present in the air of Professor Johne's laboratory, I have cultivated on gelatine plates, and subsequently in tubes, &c., a bacillus which is remarkable for its curious mode of growth on solid media. On gelatine plates which have been exposed to the air one occasionally observes a cloudy appearance gradually spreading from various points. If a cover-glass preparation is made in the usual manner, this growth is found to consist of

[6] In succession to Mr. Marshall, to whom an interpellation was addressed in my last article.

[7] In another German book on Physiology (remarkable for those shortcomings in the study of organic mechanism so much and so justly deprecated by the late Professor Rudolph Wagner), translated into English by Dr. Gamgee, of Manchester, unacquaintance with the subject is betrayed by reticence on the part of both author and translator.

a pure cultivation of a bacillus. If a tube of gelatine peptone broth is inoculated, a series of convolutions form on the surface, with filaments growing down into the gelatine, or spreading out in somewhat parallel lines from the needle track. A very characteristic appearance is also obtained by growing it upon an oblique surface of agar-agar, which has suggested to me the name of "feather-bacillus" (Fig. 2). More beautiful preparations are made by employing a method which may be used in either plate or potato cultures. It is a method which enables us in many cases to study the relative position of individual micro-organisms one to another in their growth on solid cultivating media,

FIG. 1.

Pure cultivation of bacillus anthracis in gelatine peptone broth.

FIG. 2.

Growth of the "feather-bacillus" on the oblique surface of agar-agar peptone broth.

and is as follows: A perfectly clean, usually small-sized cover-glass is carefully deposited on a plate or potato culture, and gently and evenly pressed down. One edge is then levered up carefully with a needle, and the cover-glass lifted off with forceps. It is then allowed to dry, passed through the flame, stained with a drop of fuchsin, the surplus stain washed off, and the specimen examined in water. To preserve it permanently, it is floated off the slide with water, dried, and mounted in Canada balsam. In the case of plate cultures especially, as in this case, where no liquefaction has taken place, the growth or colony is bodily transferred to the cover-glass and a vacant space mapped out on the gelatine or agar-agar corresponding exactly with the form and size of the cover-glass employed. In the case of the feather-bacillus, the individual bacilli are arranged in rows forming parallel lines, which at intervals become twisted up in the most exquisite convolutions, from which processes like the runners of a strawberry plant are sent off in various directions. These processes in turn become twisted up in varying shapes and forms.

Dresden.

CITY-ROAD HOSPITAL FOR DISEASES OF THE CHEST.—This hospital, which has been in course of enlargement for some time past by the erection of a new wing, is now approaching completion externally, but £5000 is still required before the building can be internally finished. The ground and first and second floors each contain three wards, 31 ft. by 18 ft., the third and dormer floors being set apart as dormitories for the matron and servants. The builder's contract amounts to close upon £14,000.

THE MENTAL SYMPTOMS OF AORTIC REGURGITATION.

WITH A SUMMARY OF THE NOTES ON FOURTEEN CASES.

BY J. HARRINGTON DOUTY,

SENIOR ASSISTANT MEDICAL OFFICER TO THE WORCESTER COUNTY ASYLUM.

A VERY large collection of observations, clinical and pathological, must yet be forthcoming before anything like a satisfactory conclusion can be arrived at with regard to the relations between heart lesions and certain forms of insanity; the following notes, therefore, though perhaps of small intrinsic value, are here recorded as an item towards an ultimate development of the subject. During an examination of the hearts of a number of patients in the Worcester Asylum, I have so far met with fourteen in which there is incompetence of the aortic valves. I will give a brief account of them, and afterwards refer rather more in detail to a few of the most interesting.

CASE 1.—T. P——. Dementia and general paralysis; aortic regurgitation. Cause of insanity unknown. No heredity. Passed through the ordinary stages of general paralysis.

CASE 2.—T. D——. Royal Engineers pensioner. Given to drink. Had sunstroke in the East. No heredity. Chronic mania; heard voices speaking to him day and night. Died suddenly from failure of the aortic valves.

CASE 3.—H. B——. Female. Mania. No cause known. No heredity. Aortic regurgitation. Had at first exalted delusions; is now demented, and has signs of general paralysis.

CASE 4.—S. P——. Strong heredity to insanity. Acute mania; fourth attack. Aortic regurgitation. Heard voices, elephants, lions roaring, and whistles constantly blowing in her head.

CASE 5.—P. C——. Acute mania; fourth attack. Cause unknown, excepting previous attacks. No heredity. Aortic regurgitation. Wildly excited and violent on admission. Now demented.

CASE 6.—A. J——. Chronic mania. Cause unknown. No heredity. Aortic regurgitation. Heard voices, thunder, and railway whistles whilst all was quiet around her. Died of heart disease.

CASE 7.—A. W——. Chronic mania, ending in dementia. Cause unknown. No heredity. Aortic regurgitation very marked. Delusions chiefly of a suspicious nature. Died of heart disease.

CASE 8.—J. J. E——. Chronic mania and (?) general paralysis. Cause unknown. Heredity doubtful. Has delusions, symptoms of general paralysis, and a loud double aortic bruit.

CASE 9.—H. P——. Chronic mania. Very strong heredity (second attack). Double aortic bruit. Exalted delusions, and at times violent and excited.

CASE 10.—H. D——. Chronic mania (thirty years). Cause unknown. Very marked aortic incompetence. Has many strange hallucinations; hears a bull bellowing and people talking to her, especially when she is recumbent; sees "visions."

CASE 11.—F. J——. Mania; first attack. Cause unknown. No heredity. Double aortic bruit. Hears voices and sees ghosts, and is irritable and bad-tempered.

CASE 12.—E. D——. Dementia. Cause of insanity said to be drink. Aortic regurgitation and greatly dilated left ventricle, which, with an attack of erysipelas, caused her death. Had occasional hallucinations of sight.

CASE 13.—J. W——. "Melancholia cum stupore." Cause said to be a recent severe attack of acute rheumatism. No heredity. Aortic regurgitation, which caused death.

CASE 14.—M. H——. Chronic mania. Strong heredity. Hears voices constantly talking to her, and consequently believes that people are following her to injure her. Has well-marked signs of aortic regurgitation.

N.B.—In referring to the "cause of insanity" in the above notes, I quote the information received on the subject from the friends on admission and subsequent inquiries.

The notes on the following three cases, selected from the above, are given as typical of the mental condition most commonly obtaining as symptomatic of aortic incompetence.

CASE 2.—T. D——, aged fifty, married, pensioner (Royal Engineers), well educated. He is a strong, well-nourished man,

with prominent eyes and well-marked aortic regurgitation. Capillary pulsation is visible. Mentally he is suffering from a delusional mania of two years' duration. He believes he can see the Royal Engineers surrounding him on all sides, and that, not content with this, they are up in a balloon overhead firing at him with rifles, which he hears day and night. He also hears constantly voices speaking to him by telephones—what he calls "sounds of tones of voices." Wherever he is, these sounds follow him and cause him the utmost annoyance, at times leading him to lose command of his temper, and to become violent, abusive, and agitated with rage. One day, whilst I was reasoning with him as to the impossibility of hearing these voices where no telephones existed, he spoke up sharply and angrily: "Now, look here, doctor, I am no fool; I am not going to be humbugged by you any longer; you know perfectly well you can hear these scoundrels yourself, and if you say you cannot, then I say you are one of two things—a liar or a madman." From this time forward until his death he always believed that I was mad because of my ignorance of the proximity of his foes. He died suddenly one morning on getting out of bed, eighteen months after admission. An autopsy was held, but decomposition was so far advanced that examination was unsatisfactory. The frontal lobes, especially on the right side, were remarkably atrophied. The aorta for two inches from its origin was calcified, thick, and rigid; its valves were also calcified, two of them being immovable, and the third almost so. The left ventricle was enormously hypertrophied.

CASE 9.—A. J——, female, aged seventy-seven. Cause of insanity stated by certifier to be unknown. She has well-marked diastolic bruit down the sternum, evidently of aortic origin; her pulse is collapsing, and no second sound is audible in the carotids; pulse visible in the capillaries. Mentally she is suffering from chronic delusional mania, her delusions mostly taking the form of hallucinations. She imagines she hears voices which she avers no one else can hear; these voices she thinks come from persons who are bent on drowning her in a cauldron of boiling water, the bubbling of which she also hears. Any unusual sound causes an illusion—e.g., a wheelbarrow wheeled down the corridor near her ward by a workman caused her to become greatly distressed and agitated on account of a terrible thunderstorm which she was sure was breaking overhead. The sound of water running from a tap into a bucket was to her the splashing of a huge waterfall. These hallucinations were very vivid. She would often say to me, "Don't say you do not hear them. You must hear them, unless you are stone deaf. Hark how they shout, and wrangle, and whistle. I can't sleep or rest for them; they will be the death of me if you cannot stop them." The old woman died four months after admission.

CASE 10. H. D——, female, aged fifty-six; chronic mania of thirty-nine years' duration. She has aortic regurgitation. For many years past she has had hallucinations of hearing and sight. She hears a bull almost nightly, which bellows and frightens her, amusing itself the while by routing up red currant trees and making holes in the ground. She hears various other queer sounds, and sees many curious sights. Her hallucinations are best marked, as is often the case, when she is lying down. Her temper is most irritable. A slight thing causes her to be greatly enraged. If questioned closely about her delusions, she abuses her questioner loudly in the foulest language, threatens to kill him, and invokes the arch-demon to aid her in procuring his eternal destruction. About three months ago she had an embolism of a branch of the left middle cerebral artery, with aphasia and right hemiplegia. The paralysis has almost disappeared, but symptoms of secondary sclerosis are developing.

On reference to the above cases, we find that of the fourteen no less than eleven are cases of mania; there is one of dementia, one of dementia with general paralysis, and one of melancholia. It is evident, therefore, that as far as this small collection of cases is concerned, no less than 78·5 per cent. are instances of the association of mania with aortic regurgitation. Of these eleven cases of mania no less than seven possessed very marked auditory and visual hallucinations. It seems probable that when fuller statistics are forthcoming upon this subject we shall arrive at a conclusion that the typical mental symptom of aortic regurgitation is a delusional mania, coupled with a condition of extreme instability of temperament. Patients whose aortic valves are incompetent, who are insane, are almost without exception of a touchy and excitable nature; very little upsets them; on the least provocation they will try to fight and struggle with their nurses to attain their own way, and are consequently very difficult and dangerous cases to nurse. As surely as one discovers an aortic regurgitant bruit, almost so surely is one told by the attendant of the obstinacy and irritable temper of the patient, the least thing causing a violent outburst of anger and abuse. Another very common and interesting accompaniment of this valvular lesion is the prevalence of hallucinations, whose cause, however, it is not difficult to find. General clinical observation tells us how any alteration in the state of the circulation may cause symptoms which, if persistent, would soon develop into delusions. The tinnitus resulting from an anæmic or congested brain; the clouds and obscurities complained of by the subject of grave heart lesions; the giddiness and buzzing complained of by the anæmic girl; the troublesome throbbing, humming, or whistling noises which are heard by a patient who suffers from nocturnal palpitation, are familiar points of interest. It is probable that the hallucinations resulting from aortic disease or any cause other than a local lesion of the ear or eye, are usually of central rather than of peripheral origin, for they are common in cases in which the organs of special sense have been disorganised for years. We know that usually the flow of blood through the capillaries should be constant and equable. We may infer, therefore, that the blood flowing through the minute vessels of the internal ear, the retina, and the brain itself, does so in a fairly continuous stream in health; and that not only is the rate equable, but the pressure is also constant, or at any rate not subject to any sudden and frequent variations. Given, however, a grave reflux through aortic valves, and the converse of these conditions is established; the pressure in the capillaries becomes rhythmically various, increasing and diminishing with every cardiac systole and diastole. We know how acutely sensitive are the nervous centres and their peripheral arrangements of any departure from the normal. Such a condition of things, therefore, as that resulting from a grave aortic incompetence may produce a material interference with and perversion of the performance of their functions. It seems but natural, therefore, that, in the majority of cases associated with aortic reflux, hallucinations should be so common. Of course many things may occur to prevent the development of hallucinations, and complications may arise to mask the evidence of their existence. They are prominent symptoms in 50 per cent of the cases I have quoted. It is further noticeable that amongst the cases of mania several who had not hallucinations had exalted delusions and symptoms of general paralysis; this association of exaltation of idea and general paralysis with aortic regurgitation may be accidental, or it may result from the cardiac hypertrophy which naturally attends such lesions, and which has been described by Dr. Savage as productive of symptoms resembling those of general paralysis. One only of the fourteen cases was a simple dementia. The patient was listless, apathetic, and weak-minded, and had a feeble memory. Dr. Douglas Powell says he considers a certain amount of torpor and fatigue of mind to accompany many cases of aortic regurgitation, and to be relieved by the recumbent posture. This patient with dementia had, I should mention, hallucinations of sight, and would insist that she saw people walking about in the night. She assisted one of the night nurses, and one night declared she saw me go into one of the wards at two or three in the morning, calling the nurse's attention to the "Doctor going down the passage." The case of "melancholia cum stupore" was the direct result of acute rheumatism, from which the patient had just recovered before admission, and which left him emaciated, feeble, and anæmic; consequently the melancholic prevailed over the maniacal symptoms, which might have been prominent had his case been an uncomplicated one. It is interesting to note that heredity to insanity only existed in three out of the fourteen cases; sunstroke and drink were possible factors in two; in all the others no probable cause existed other than the heart lesion; and in the three with heredity one cannot say how far the heart disease was an exciting factor which developed the predisposing cause. How far the drink and sunstroke acted as causes in the two cases is also questionable; they neither of them recovered; one died, and the other is a chronic case. Had drink alone been answerable for the mania they might have recovered; atheroma and aortic disease, however, resulted from the drink, and hence death and chronicity. The typical form of insanity, then, resulting from aortic re-

gurgitation is probably a delusional mania, frequently associated with very marked hallucinations and with a tendency to violent outbursts of rage and anger. That in many such cases no exciting cause for the insanity can be found other than the heart lesion, is also evident from the fact that in twelve out of only fourteen cases this was so. The recovery rate for these fourteen cases of insanity is 0 per cent.; this fact points strongly to the importance of the heart mischief as a causative factor; the insanity is a symptom of an incurable organic lesion, and as such is also itself incurable. Rest as a therapeutical agent is more or less serviceable in these cases; a few have recovered for a brief period sufficiently to leave the asylum, but they soon returned. If we had access to their aortic valves, and could repair their lesion, then we might possibly alter our prognosis.

Powick, Worcester.

LYMPHATIC INFILTRATION OF THE SKIN IN CARCINOMA OF THE BREAST.

BY JOHN POLAND, F.R.C.S.

IT is well known that there is a peculiar condition of the skin over the breast which is clearly recognised as occurring in acute cancer of the breast and as cancerous infection, yet its true nature and value appear to be but little understood. The condition I refer to is the brawny-like state—the early stage of the cuirass condition of French authors—a state in which more or less of the whole skin covering the mammary gland is rigid, œdematous-looking, and brawny, not unlike the rind of a lemon or boiled orange. This brawny condition of skin is found only in rapidly-growing carcinomatous tumours, or in those of slower growth where fresh increase has suddenly taken place. Later on the skin in the neighbourhood of the breast becomes in like manner affected, and on slight pressure with the fingers small local shot-like thickenings can be felt, which rapidly form into nodules and may present the cuirass condition above mentioned. The lymphatic glands in the axilla and above the clavicle may not be perceptibly enlarged, therefore we find it to be of especial importance that this condition of skin be understood in its true light, for undoubtedly all parts of the lymphatic system are already extensively infected by cancer cells, not only the network of lymphatics of the skin (as indicated by this condition), but also the subcutaneous lymphatics and the neighbouring glands. The decision of the surgeon as to the curability of the case by operation will consequently be much influenced by this sign. If he decide to operate under this condition, it will compel him to remove the skin very widely indeed, together with the pectoral muscle, and to clean out the axilla as thoroughly as possible, even though the glands be not felt by means of the fingers before operation. If a section be made through the skin and tumour, the former will be found to be enormously thickened—sometimes to as much as half or three-quarters of an inch,—white, and œdematous, a little clear serum often running out on section. Extending outwards to this from the carcinomatous mass in the breast-substance beneath may be seen bands or lines of cancerous growth. In all the cases mentioned below the growth of the disease was central and had already invaded the nipple and part of the areola, and the skin over the whole area of the breast to a distance of four or five inches outwards from the nipple in this thickened condition, being at the peripheral parts thinner and less involved. Microscopically the dense network of cutaneous lymphatics, as has been ably worked out and described by Dr. Hoggan in the Pathological Society's Transactions for 1878, and in the *Archives de Physiologie* for 1880, will be found to be plugged with cancer cells, which, later on spreading to the walls of the lymphatics, develop secondary nodules. The tissue of the skin itself is altered much in character, becoming hard, compact, and more bulky. In the course of a few months at Guy's Hospital I observed three such cases, and a fourth closely resembling these in its clinical features and naked-eye appearances on section, but which on microscopical examination proved to be an entirely inflammatory condition of the skin over a breast affected with acute cancer, and due to the repeated application of leeches and poultices to the cancerous breast. The erroneous supposition that lymphatic infiltration of skin existed in this case might have been avoided had the extreme tenderness and slight red blush (which are not present in the cases we are considering) been taken into account. Unfortunately, in one only of the three cases was a careful microscopical examination made of the skin. In all, however, the rough appearances were the same, and in all there were numerous minute cancerous nodules infiltrating widely the pectoral muscles in rows like strings of beads parallel with the muscular fibres and running into each other, indicating that the cancer cells were at this time widely disseminated. Death occurred in all the cases a few weeks after removal of the breast, and in two of the cases the affected axillary glands.

The case from which the microscopical sections were made was that of Susan F——, aged forty-nine, admitted into Guy's Hospital on September 6th, 1883. She had had ten children, nine of whom she had suckled chiefly with the left breast. Thirteen months before she felt acute pain and a "lump" on the outer side of the right breast. This very gradually increased for twelve months, when it was of the size of a five-shilling piece. During the last three months it had rapidly increased in size, with pain and swelling in the right axilla. Three weeks before admission the skin over the breast had begun to assume the condition described below. On admission the site of the right breast was occupied by a hard rounded mass, six by four inches, implicating the skin, but freely movable over the pectoral muscle. The nipple was retracted and the areola puckered and irregular with small nodules. The skin covering the whole of the mammary gland had an œdematous and irregular appearance, looking and feeling not unlike boiled orange-rind, and for a distance of three inches, more especially marked above the nipple, was exceedingly brawny and studded with numerous small elevations about the size of millet-seeds. Some glands under the anterior fold of the axilla were felt to be enlarged. On Sept. 14th the breast was removed, together with a large amount of thickened skin. Four glands were turned out of the axilla and a portion of the pectoral muscle cut away. The latter was found to be so largely scattered with small cancerous nodules that the operation was not proceeded with any further. Recurrence and death rapidly took place. On section, the growth was central, white, tough, and typical of acute scirrhus of the breast, with trabeculæ of growth extending to the skin. The nipple was invaded by the growth. The skin external to the nipple was three-quarters of an inch thick, elsewhere about one-eighth of an inch, gradually diminishing in thickness towards the periphery of the breast. Specimens of the skin radiating from the nipple outwards were sent to Dr. Hoggan, together with similar portions of the skin from the case with supposed lymphatic affection. Dr. Hoggan kindly made sections of the skin in each of the two cases, and sent me the following report of the result of his examination:—

"I have now completed the preparation of the portions of skin you left with me, and carefully examined them and compared them with each other. Your two cases of cancer, which you say were clinically almost identical, turn out to be entirely dissimilar when examined histologically. Your first case was typical of cancer spreading by means of the lymphatics, even in the peripheral direction—that is to say, in the direction opposite to that of the lymphatic glands. Indeed, in the unfortunately too small specimen of skin from the case which you gave me, the only locality where cancer cells were to be seen in the whole tissue was within the lympatic vessels of the skin. Only, however, the deeper lymphatics of the skin were plugged with cancer cells in that specimen, the most superficial lymphatics being only plugged with lymph cells, into which the cancerous infection had not as yet spread. Even of the deeper lymphatics the walls had not as yet become cancerous, and consequently there was no formation or development of secondary cancerous tumours from the cancerous lymphatics. Altogether, your first case was identical with the one I published, jointly with my wife, in the *Archives de Physiologie* for 1880; the question of comparative plugging of the lymphatics or development of secondary tumours being dependent on the stage to which the disease had reached at the exact spot from which your specimen had been taken. As in my case, the presence of the cancer cells, even within the lymphatics, had modified the character of the gelatinous tissue of the skin, which was compact, and afforded no evidence of either the presence of œdema or of cell infiltration. Your second case, on the contrary, showed no plugging of the lymphatics

by cancer cells, the cancer cells being wholly, and in great masses, extra-lymphatic. Great œdema of the gelatinous tissue had existed, and separated that tissue into long wavy fibres resembling roughly in appearance the coarse fibres of Manilla hemp, all of which lay parallel with the epidermic surface. The gelatinous tissue was also densely infiltrated with cells, more especially in the superficial portion, and the nerves of the skin were completely ensheathed in dense masses of leucocytes, which in many cases simulated the appearance of plugged lymphatics; but the invariable presence of the lumen of a vessel in the centre of each column of cells, joined to other peculiarities, prevented any mistake as to whether they were veins or lymphatics. Again, the epidermis was largely increased in thickness, and the papillæ had become greatly elongated—the whole character, indeed, of the skin pointing to intense inflammation and œdema of the part. Unlike your first case, the lymphatics were nowhere fixed in their dilated condition, and were indeed as little observable in your specimens as they are in normal skin. In your first case, on the contrary, the modified character of the gelatinous tissue (scirrhous) left the lymphatics gaping widely, even after the cancerous plug had been washed away from within them. Of your second case, you gave me two fragments of supposed infected skin: one portion, an inch and a quarter in length, was represented by you as taken from the altered skin radiating in a line *from* the cancerous focus, and it was anticipated that at some point in that strip of skin we should probably observe the first development of secondary cancerous tumours from the lymphatics. As it has happened, there are no cancer cells either inside or outside the lymphatics, or anywhere within that portion of skin, except in one sweat gland at one extremity. In the other portion of skin from the focus of the disease itself, I find the whole of the hypodermis invaded with the cancer cells, as well as the lower portion of the gelatinous tissue of the dermis, but neither in the superficial portion nor in the lymphatics are any cancer cells to be seen. In that portion of skin, however, the gelatinous tissue was compact, as it generally is in the presence of cancer cells, and there was none of the Manilla hemp œdematous dissociation of the tissue to be seen as in the neighbouring skin. Strangely enough, in that portion the fat seemed to have undergone some profound alteration, at all events in its naked eye appearances, being somewhat cheesy in character. This was, no doubt, due to the action of the cancer cells, for the whole of the fat tracts in the hypodermis were densely infiltrated with cancer cells, which seemed to infect the fat cells and change the character of their contents. In the second case the cancer was spreading *only* by direct contiguity, especially along the hypodermis, and it owed nothing whatever to lymphatic infection. Not having seen the cases before excision, it would scarcely be safe for me to speculate upon the cause of the difference of character in the two cases. Almost certainly the cancer in your second case had developed first in some structure deep in the hypodermis, probably in the deeper portion of the mammary gland; and if it had affected the lymphatics at all, it was only the deep efferent lymphatics passing to the axillary glands—within which, however, the cancer cells had not as yet accumulated sufficiently to reach the collecting lymphatics of the dermis, certainly not as yet on the peripheral side of the cancer. In your first case the cancer may have developed either in a dermic structure (as in my case), such as a sweat gland, or in the superficial portions of the mammary gland—superficial enough, at all events, to infect the dermic lymphatics, to occlude them, and to pass on the cancerous influence through the plug of cells which had collected on the peripheral side of the occluded and infected lymphatics. Of course, the prognosis would be much more unfavourable in this case than in the other, and much greater latitude in operating would have to be exercised; and the very fact that you insist so strongly on their clinical similarity shows the necessity which exists of clearly differentiating between the two very different conditions actually produced in them."

The above case is, I believe, the second recorded (Dr. Hoggan's case of cancer of the skin being the first) in which cancerous infection of the lymphatics of the skin has been found. A careful microscopical examination of the skin in all cases that present the above condition will furnish us with a most invaluable sign.

Finsbury-square, E.C.

THE TRUE FIRST STAGE OF GENERAL PARALYSIS OF THE INSANE.

By HENRY SUTHERLAND, M.D.,
PHYSICIAN TO OTTO HOUSE AND BLACKLANDS HOUSE ASYLUMS, LECTURER ON INSANITY TO THE WESTMINSTER HOSPITAL.

FROM time to time various writers have published observations on the premonitory symptoms of general paralysis of the insane, such observations for the most part alluding only to the symptoms of this fatal disorder when fully developed. It will be my endeavour in the following remarks to sound an alarm, a note of warning both to physicians and their patients, so that, if possible, the growth of this neurotic fungus may be nipped in the bud in those whose habits or hereditary tendencies expose them more especially to cerebral and spinal diseases.

It is impossible to prophesy, if guided only by symptoms which are really premonitory, what form of nervous disorder will occur in this or that patient. We are unable to state for certain, in bodily diseases, if a rigor will be succeeded by scarlatina, by uræmia, by blood-poisoning, or by ague. Neither can we affirm with certainty that the presence of a cough will ultimately lead to an attack of pneumonia, pleurisy, phthisis, or disorder of the stomach. And in like manner it is equally impossible to say that certain symptoms will terminate in hemiplegia, epilepsy, locomotor ataxy, palsy, or general paralysis of the insane. In my own experience the premonitory symptoms of general paralysis occasionally precede the actual commencement of the disorder by many years. Quite recently the writer was called into consultation in a case of true general paralysis. Seven years previously the patient had suffered from an apoplectic attack, from which he had recovered, although never able to do so much work as he had got through previously. A second similar case is that of a medical man, who, two years before any decided symptoms of general paralysis appeared, had delivered a woman unnecessarily with the forceps, killing both mother and child. No unusual symptoms beyond lying and eccentricity were noticed in his conduct between the date of this act and that of an outbreak of insanity.

Sometimes cause and effect get mixed in the minds of the patient's friends. I was recently engaged to meet a captain in the navy who had arrived from China, in order that I might give an opinion on his case. The relatives stated that the disease (which was undoubtedly general paralysis[1]) was caused by the patient standing in water, duck-shooting, a week before any mental symptoms were noticed. His letters, however, which I had carefully read, gave evidence of alcoholic and sexual excess, extending over at least five years, during which time, I have no hesitation in saying, the patient must have had grave warnings of his future condition.

I have noticed the following symptoms in several cases which have come both under my observation and treatment, and which ultimately led to general paralysis and other forms of severe nervous disorder:—An inability to speak, write, walk, sing, read, or fix the attention as well as usual; a feeling when conversing with others that a blank had taken possession of the mind, rendering the patient unable for the moment to answer a simple question; a sensation of great fatigue after a short walk, and of utter prostration after any unusual exertion; a feeling of "pins and needles" in the feet and knees without adequate cause, such as pressure upon the sciatic nerves and popliteal arteries, or exposure to cold; an inability to adjust the iris as rapidly as usual after looking at a near object and then turning suddenly to one more distant; a fixed squint, lasting several minutes, unaccompanied by any loss of consciousness or epileptiform attack, but yet causing much alarm and distress to the patient; a sensation as if hot irons were being dragged along the forearms; sexual desire and erectile power much diminished, or morbid erotic desires towards women, especially in cases where the symptoms have been caused by a blow on the head or spine; tremor of the feet in performing simple actions, such as getting out of cabs or walking downstairs; tremor of the hands in

[1] Since writing the above the symptoms of general paralysis have disappeared in this patient. Time will show whether this is due to a remission or to a wrong diagnosis.

writing or any work requiring delicate manipulation; slight vertigo; profound depression without adequate cause, occasionally succeeded by inappropriate outbursts of merriment; nervousness and a love of solitude, yet accompanied by a dread of being alone; a general feeling of malaise which cannot be accounted for, succeeded, if the disease be not checked, by the comfortable sensations accompanying general paralysis in its more advanced stages.

As we have said, it is impossible to foretell the exact form the nervous disorder will take. Obviously the treatment of such symptoms is prophylactic rather than medical. The patient should avoid all that is evil and do all that is good. He should seek society quietly and in moderation, avoiding heavy dinners, late hours, and alcoholic excess. He should take regular outdoor exercise, but not enough to fatigue. Any new game, such as lawn-tennis, in one who has not played before, is to be deprecated. Even a revival of the sports of youth after a long cessation from them has its risks. He should sleep enough and not too much, being careful not to make any too sudden alteration in this respect. Sexual intercourse should be altogether avoided while the above-mentioned symptoms are present. In married people, an abstinence for three months in mild cases, and for six months in those which are more severe, are the shortest periods from which any good can be expected. The smaller picture-galleries or open-air sports should be preferred as amusements to stifling theatres and prolonged concerts. The patient should do less work than usual, and, if possible, throw his worries into the hands of a trustworthy agent. All absorbing accomplishments, all arduous reading, should be put aside for a time, and novels of the lightest and least exciting description should be indulged in. A course of "Pickwick" is invaluable in such cases. The patient should avoid all sources of irritation, and should remember that, if he, as the head of the house, has his troubles to bear, there may be others who are compelled to live with him, who, like the Spartan boy, are gnawed within by a wolfish sorrow. But in any case, should any group of the symptoms enumerated arise, the family physician should be consulted, as it is impossible for those who have not studied medicine to compete, in treating even their own cases, with those who have been born and bred in the art of healing.

Richmond-terrace, S.W.

REMOVAL OF THE TONGUE AND FLOOR OF THE MOUTH FOR EXTENSIVE EPITHELIOMA.

BY MAYO COLLIER, M.S. LOND., F.R.C.S. ENG.,
SENIOR ASSISTANT-SURGEON TO THE NORTH-WEST LONDON HOSPITAL, ASSISTANT DEMONSTRATOR OF ANATOMY AT THE LONDON HOSPITAL MEDICAL COLLEGE.

THREE weeks ago I was consulted by a patient, aged sixty-nine, suffering from an affection of the tongue and floor of the mouth. He had first noticed a sore three months ago near the right border of the tongue about its middle. The disease had quickly spread, and involved the anterior two-thirds of the tongue and floor of the mouth symmetrically, rendering the organ immovable, and completely filling the floor of the mouth. The patient had been a great smoker, was possessed apparently of good teeth, but suffered considerable pain in the right side of the jaw and face. He stated he was getting weak and losing flesh. There was no family history of cancer.

There was no doubt that this was a case of extensive epithelioma, and the only points in reserve were the advisability and practicability of its removal. Having consulted with Sir W. Mac Cormac, I determined to remove the whole growth from below, feeling sure it could be done. The case was sent into St. Thomas's Home, and on Friday, the 19th, I performed the following operation, being kindly assisted by Mr. Battle, Mr. Jennings, and Mr. Sanderson.

The two lingual arteries were first secured by ligatures at the apices of the great cornua of the hyoid bone, so as to prevent subsequent bleeding from the dorsalis lingual, sublingual, and ranine arteries. The ordinary curved skin incisions from the angle of the jaw to the chin were adopted, the centre of the curve just reaching the attachment of the tendon of the digastric muscle to the hyoid bone. The submaxillary glands were next turned outwards and the free edges of the mylo-hyoid muscles exposed. These were notched as far as the outer borders of the genio-hyoid muscles, thus preserving the central attachments. The under aspect of the floor of the mouth was now perfectly free, and one finger being passed between the genio-hyo-glossi and genio-hyoid muscles, as a guide, the tongue and floor of the mouth were completely and easily separated from the lower jaw. A further separation was effected as far down as the hyoid bone, and the whole structures—tongue, sublingual glands, and floor of mouth—removed *en masse* by the écraseur. Not the slightest hæmorrhage followed the removal. The inner aspect of the jaw was next scraped, and some affected glands discovered at the outer borders of the genio-hyoid muscles being removed, the cavity was swabbed out with a solution of chloride of zinc (forty grains to an ounce). Two large drainage-tubes were secured on each side of the stump, and brought out below the angle of the jaw, so as to ensure perfect drainage by occupying the most dependent positions. The wounds in the neck were closed by silk sutures, and dressed with dry iodoform wool and gauze.

During the operation, which lasted a little over an hour, not the slightest difficulty was experienced by the anæsthetist, neither did blood enter the larynx or pharynx. At no time had the anæsthetic to be discontinued, the breathing being good throughout. The subsequent progress of the case has been all that could be desired. By the use of iodoform and good drainage the breath has remained perfectly sweet. No discharge has reached the larynx or pharynx, and the temperature has scarcely been above normal. The stitches were removed on the third day. When I last visited the patient he was sleeping tranquilly, and was reported to have taken nourishment freely, slept well, and complained of nothing.

Aug. 18th.—The patient progressed most satisfactorily, and left the Home on the twenty-first day. He has regained strength and improved in weight, and has just visited me, having walked three miles. There is not the slightest appearance of return, and the patient experiences no difficulty in swallowing or in making himself intelligible.

Remarks.—An attempt to remove the growth by the mouth was out of the question, and, as section of the lip and lower jaw does not offer any great advantages, I resorted to the method related, feeling certain that this is the easiest and safest operation in all difficult cases. Czerny has devised an exactly similar operation, but with what success I am unable to say. Now, I claim for this mode of procedure advantages that are many and manifest:—1. There is no danger at any time of the patient being suffocated by his own blood, and so no necessity for tracheotomy before, during, or after the operation, the tongue and floor of the mouth being the last structures divided. 2. There is no interference with the anæsthetist till the last few moments, when the structures are divided *en masse*, thus dispensing with disagreeable pauses in the operation and partial return to consciousness of the patient. 3. There is no danger of the stump falling back on the larynx, as the attachments of the larynx and hyoid bone to the lower jaw are preserved. 4. The whole growth, however extensive, with any diseased glands, can be entirely removed. 5. Perfect drainage of the cavity is obtained by placing the drainage-tubes in the most dependent positions, so ensuring against sepsis, preventing any overflow into the larynx, and allowing the patient to sleep comfortably in the recumbent position. 6. The operation is almost bloodless if proper care be taken.

New Cavendish-street, W.

HOSPITAL SATURDAY FUND.—At a recent meeting of the Council of this fund attention was called to the action of the managing authorities of University College Hospital in limiting the nurses of the establishment to members of the Church of England, and refusing to receive as a probationer nurse a Nonconformist lady. Much discussion ensued; but as the awards of the fund, based upon the utility achieved, efficiency of management attained, and economy practised in the participating institutions, were yet undetermined for the present year, it was decided to refer to the Distribution Committee all the circumstances connected with the present controversy which have arisen as to hospital nursing.

MEDICAL AND SURGICAL PRACTICE IN UPPER ASSAM.

BY S. O. BISHOP, M.R.C.S., L.R.C.P.,
MEDICAL SUPERINTENDENT, KOOMTAI BADALIPAR AND OTHER TEA ESTATES, UPPER ASSAM, INDIA.

DURING the last two or three years I have treated four cases of fractured femur, and in neither case have I had any shortening. One was a simple transverse fracture in the upper third; one was fractured just above the condyles; and the other two fractures occurred in one patient—one at the upper third, and the other (comminuted) lower down. These fractures were all treated in the ordinary way with the long splint, perineal bandage, &c. After about the first week was over I attached two additional bandages to either end of the splint, one going through the hole with the perineal bandage, and the other being fastened round the splint at the ankle; these I used to attach to any convenient post and tighten up every day. Probably this is not a new idea, but I had not seen it applied before; it enables one to get a splendid extension. When it is borne in mind that all these four cases were treated in an ordinary coolie hut, which on first entering is very often so dark as to render it impossible to see anything, I think the results are highly satisfactory.

It is wonderful how well these coolies bear shock. Not long ago a coolie on this factory was out in some grass jungle, when all at once in a narrow path he met with two bears. He had nothing in his hand but a small axe for cutting firewood; this he foolishly threw at the female bear, and struck her on a tender part—viz., the nose. This sent her away howling; but her partner being enraged at the slight offered to the fair sex, rushed at him and severely mawled him. His back and the back part of his thighs received some terrible gashes, but his face suffered most. The bear had evidently attacked him from behind, and had drawn one paw right across his face, tearing away all the soft parts, but leaving his eyes unscathed. The orbital plates of the superior maxillary bones were torn out, and the whole of the soft parts above his upper lip were torn away and hanging down. He looked as if a shell had exploded in his face, and a more dreadful sight I have never seen. The way in which the poor fellow's eyes escaped must have been by the claws passing between them above and below, for he had a long wound in his forehead. After receiving the injury, however, he got up, picked up his axe, and walked to the factory, a distance of two miles. He was only assisted for the last quarter of a mile. This occurred in July, with the thermometer standing at 90° daily. When I was called to see the man he was in his hut and surrounded by a number of coolies. He refused to go to the hospital, but said, "Let me die here." I gave him a stimulant, and then proceeded to cleanse and dress the wounded parts, which he bore with wonderful composure. The procedure occupied about two hours, and I found it to be no easy task. I was in a small hut, and it was about twelve o'clock in the middle of the day, with a hot sun, the thermometer being at 90°. I carefully cleansed the wound with tepid water and carbolic acid. I had to remove portions of bone here and there, and any place I could not suture I filled up with lint steeped in compound tincture of benzoine, as recommended by Mr. Bryant of Guy's Hospital in cases of compound fracture. This case did remarkably well; the man had an attack of erysipelas, and a scratch in the throat gave me some anxiety for a few days. The erysipelas I treated with caustic lotion, giving the patient a mixture of chlorate of potash and tincture of steel. I also applied hot fomentations continually to the throat. The case terminated very satisfactorily, though one eye was lost from sloughing. He is now able to do his ordinary work as a coolie. It is fortunate, however, that he married before the catastrophe happened, as it has of course greatly marred his appearance. I think, considering that the case was treated in a small coolie hut in the middle of a hot season, the results were most satisfactory. The wounds on the back and thighs were brought together with silver sutures, and dressed with carbolic oil; these lacerations gave no trouble.

Coolies bear large doses of ipecacuanha remarkably well. For dysentery, instead of prescribing, as I used to do, ten grains in a mixture every four hours, I give, as recommended by Dr. Ewart of Calcutta, large doses night and morning, and during the day ordinary compound chalk mixture. This gentleman's argument is very good. He says that giving a large dose night and morning is far better than administering small doses every four hours, for by the latter course the stomach is kept in a constant state of nausea, and food is rendered difficult to be taken. My usual plan in a recent case of dysentery is to give a small dose of castor oil and laudanum, and in the evening a dose of laudanum, according to the age of the patient, applying a large mustard and linseed-meal poultice to the abdomen half an hour afterwards. I give twenty-five grains of ipecacuanha powder with a little soda or bismuth, and repeat the treatment again in the morning, and during the day administer a few doses of the ordinary chalk mixture. The diet is usually sago and milk, perhaps with a little port wine. I can fully bear out the efficacy of this treatment, as recommended by Dr. Ewart. Coolies bear large doses of iodide of potash very well, and I have seldom seen the slightest approach to salivation, though in bad ulcers the result of syphilis I give thirty grains a day; they stand mercury equally well.

Practice out here is of a very mixed class character, and many prejudices have to be contended against in caste. Every garden has a hospital, and there is no stint of medicines or instruments. The reader will probably ask, Why not compel the patient to go in? Of course that can be done, but it must be recollected that he is not anyone's property; and if force be employed, as soon as his agreement is up he will leave and go to a garden where it is not compulsory for him to go into hospital. Each coolie has to be inspected, and it costs something like £10 a head; he has a three years' agreement, and it would be a great loss if he were to leave at the expiration of his term, as he would probably take a number of his friends with him. A considerable amount of judgment has therefore to be exercised. We usually have, however, an abundance of new cases in hospital, both of those who have no friends and those who go in of their own accord. But caste is the fatal curse of India.

It is hard work out here. Either the sun is very hot, or else the rain is pouring down in torrents. The roads are also very indifferent. We have long journeys to ride, and at the end of our journey find thirty or forty coolies collected for us to examine, from whom the shammers have to be eliminated and sent to work, which requires a good deal of tact. During the rains the chief ailments are dysentery, fevers, dropsy resulting from anæmia, diarrhœa, sometimes cholera, and during the fruit season any amount of choleraic diarrhœa, caused by eating unripe mangoes, which often amounts in severity to cholera. Of course we get accidents of all kinds, but not many operations. During my ten years I have had a few amputations, but never came across a case of stone.

Upper Assam, India.

A NOTE ON THE

USE OF THE ELECTRIC LIGHT IN THE SURGERY OF THE BLADDER AND RECTUM.

BY A. W. MAYO ROBSON, F.R.C.S.,
HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY.

THE following brief notes on the advantages of a portable electric lamp in operations in the bladder and rectum may possibly be of interest to some of the readers of THE LANCET.

A. S——, aged fifty-four, living near Scarborough, who had suffered for three years from hæmaturia and other symptoms of tumour of the bladder, came to Leeds to consult me. I told her that I suspected tumour of the bladder, but could not positively say until I had dilated the urethra and carefully explored the viscus. She consented to have this done, but asked me to perform no extensive operation without further consulting her. On June 11th, under ether, I dilated the urethra by means of Weiss's dilator, and passed my index finger into the bladder, when it impinged on a hard, flattened, and nodulated tumour attached to the back part of the bladder close to the entrance of the left ureter, by a base of quite an inch and a half. I now passed in a small half-candle Swann's electric lamp

fixed to a long slender handle and connected to a Faure's storage battery, thus illuminating the interior of the bladder, exposing the tumour, and showing me a bleeding surface, to which I was enabled to exactly apply a strong perchloride of iron solution. Feeling that I could with some difficulty remove the tumour, but not without considerable risk to the patient, I explained the matter fully to her and her friends, who decided not to have any further operation performed, as I could not promise them that the growth, which I believed to be epithelioma, would not return. My patient was much relieved of her hæmorrhage, had no constitutional symptoms, and did not suffer from incontinence, the next night only having to pass urine once. She was enabled to return home after a short time, apparently relieved.

In a case of rather extensive internal hæmorrhoids which I had removed by the clamp and cautery, I noticed a little bright-red blood trickling from the anus just before the patient was being removed from the operating-table, and on dilating the rectum found that there had been considerable hæmorrhage into the bowel. I ligatured several oozing points, but as the bleeding continued I inserted my electric lamp and at once lit up the site of operation, revealing a pumping artery more than an inch from the anus, after the ligature of which there was no more trouble. My small battery is quite portable, and can be used either for the light or for a small cautery; it can be carried in an ordinary instrument bag, and when it is exhausted is soon recharged by being connected to a fixed chromic acid battery. Mr. Oliver, the electrician at the Leeds Infirmary, kindly made mine for me; but I believe that Messrs. Mayer and Meltzer manufacture a similar apparatus.

Leeds.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

EXCISION OF THE TONGUE FOR EPITHELIOMA; RECOVERY.

(Under the care of Mr. HERBERT PAGE.)

THE removal of the tongue for epithelioma, several cases of which have been recently recorded in this journal, is an operation of comparative frequency, and it is desirable that the profession generally should consider the advantages of the different methods employed. These may be briefly mentioned—the application of a ligature, removal by means of some form of écraseur (as in the case which we publish), excision by means of scissors or knife (an example of which will be found in our present volume, at p. 113, where also there are some interesting remarks on this method of operating). The first plan is only applicable to cases in which the disease is localised, and its use is followed by considerable discomfort during the separation of the slough. The écraseur is the instrument which for a long time found most favour, and which still has strong support, its advocates contending that the disease is slowly but effectually removed with less hæmorrhage than by any other method. Removal by the scissors was a very formidable operation at first; but with the improved instruments for arresting hæmorrhage now used it is possible to remove the whole tongue rapidly, securing the vessels as they show themselves, so that the patient loses very little blood, and there is a clean surface left to granulate. Mr. Page performed tracheotomy as a preliminary step to the operation in the case about to be narrated. For the notes of the case we are indebted to Mr. George Spear.

E. G——, aged fifty, a packer, admitted on Feb. 1st, 1885. The patient is a man of average height and weight; aspect rather anæmic; general health fairly good. Thirty years ago he contracted syphilis, and had well-marked secondary symptoms. He was under treatment for this three or four months. Since then he has had no further symptoms of the attack. There is no family history of cancer or tumour. He has been in the habit of smoking about four pipes of tobacco daily for several years, using a common clay pipe. In his work of packing parcels, hampers, &c., for the last three years, he has had to lick a large number of adhesive labels. For several months he has noticed that his tongue has been covered with a thick, white fur; there was some dyspeptic trouble occasionally, and loss of appetite, but nothing that required medical treatment. Later, the side of the tongue became sore, causing pain and difficulty in mastication. He had a mouth-wash for this, and it got better, but the white coating remained. About Christmas the patient found that his tongue was getting worse; it became very painful, and a swelling formed, which burst and pus was discharged. Taking food caused considerable pain, and finding that his general health was giving way, the patient came as an out-patient on Jan. 20th, 1885. Epithelioma was diagnosed, but to clear up any doubt iodide of potassium in ten-grain doses three times a day was given, but without benefit. Operative interference being evidently necessary, the patient was admitted to Thistlethwaite ward. Simple diet was ordered, with beef jelly, a pint of milk, and two eggs daily; the mouth and throat to be washed frequently with a gargle of chlorate of potassium, and the bowels cleared with a colocynth and hyoscyamus pill. On examining the tongue, it was seen to be covered with a thick white coat of fur, which had an irregular, tesselated, or wickerwork appearance. In the middle of the left half of the tongue was an elevated patch of ulceration extending from the raphé nearly to the edge, and anteriorly nearly to the tip of the tongue. The front part of the ulcer was broken down and covered with a layer of pus; through this part a fissure ran from left to right. A smaller crack or fissure was seen at the middle of the ulceration. The whole mass had an indurated feel, and occupied nearly the entire thickness of the tongue. The induration had not diminished since the administration of the iodide. There was nothing noteworthy about the glands.

On February 4th the patient was removed to the operating theatre, and, anæsthesia having been induced by the administration of ether, Mr. Page proceeded to operate. As a preliminary step tracheotomy was performed, the object of this being twofold—namely, to allow the throat to be plugged in order that blood should not get into the trachea, and that pure air should be inspired, thus avoiding the risk of septic pneumonia after the operation by breathing air which had passed over the suppurating surface. This was done in the usual way, and a silver tracheotomy tube placed in the opening and secured by tapes fastened round the patient's neck. Mr. Page then operated upon the tongue. The throat was plugged with an antiseptic sponge, and the mouth kept open by a Ferguson's gag. The frænum, mucous membrane, hyoglossus, and genio-hyoglossus, were divided by scissors, so as to free the tongue from its attachments beneath. The end of the tongue was then secured by two pieces of silk, and drawn well forwards. With a scalpel the tongue was divided along the raphé, the incision being carried well beyond the diseased part. A large curved mounted needle was then passed through the tongue a little beyond the diseased part, and the tongue being then drawn forward and upward, Mr. Page applied the écraseur, using a stout hempen cord instead of the chain, as being less likely to lacerate, and exercising more steady compression upon the vessels. The loop of the cord was placed behind the curved needle, and thus prevented from slipping forwards. A turn was given every few seconds, gradually cutting through the mass. The ranine artery could be seen pulsating after it was divided, but there was no hæmorrhage from it. The vessel was drawn out from the posterior part of the tongue by the compression of the cord, and was easily secured (as a matter of precaution) by a ligature. Twenty-three minutes were required to cut through one half of the tongue, and, this being completed, a fresh sponge was placed in the throat and the operation continued upon the other half. The details were precisely similar, the same time being occupied, and the artery drawn out and tied as before. During the operation upon the tongue chloroform was administered by sprinkling it upon a pad of lint placed over the tracheotomy wound. There was very little hæmorrhage throughout the operation. The mouth was well washed out with a solution of chloride of zinc, the sponge removed from the throat, and the patient placed in bed. The bed was surrounded with curtains, and a warm, moist atmosphere maintained by means of a jet of steam. Mr. Page decided that it was unnecessary to keep

the throat plugged with a sponge, as the patient breathed almost entirely through the tracheotomy tube.

The patient rallied well after the operation. Temperature 99·2°; pulse 80, full and soft, but intermittent. The mouth was ordered to be sponged out frequently with weak Condy's fluid. A nutrient enema of half an ounce of brandy and an ounce and a half of beef jelly was given every four hours. No food or drink by the mouth, except a teaspoonful of iced milk and brandy occasionally.

Feb. 5th.—The patient had a good night, sleeping for an hour and a half at a time. No opiate was required. There has been no vomiting and no hæmorrhage. Urine passed without difficulty. The nutrient enemata are retained. Temperature normal; pulse 80, fair.

6th.—The patient slept well; he coughs slightly now and then. The breathing is perfectly easy and quiet through the tube, which is cleaned three times a day. There is a layer of healthy-looking pus over the cut surface of the tongue. No pain. The patient drinks a little iced milk now and then. Bowels open twice. Temperature normal; pulse 80, good.

7th.—The patient did not sleep so well last night, and a quarter of a grain of morphia was given hypodermically, after which he slept four hours. The nutrient enemata are discontinued, and a nutrient suppository passed into the rectum three times a day. The patient is fed with milk and brandy through an elastic œsophagus tube passed into the stomach every four hours. There is free but not excessive discharge from the mouth; it is kept clean by frequent rinsing and sponging with dilute Condy's fluid. The temperature rose last night to 100°; this morning 99° was registered.

10th.—Patient doing exceedingly well. He is now able to take liquid food by the mouth quite easily; the nutrient suppositories are discontinued, and a diet of eggs, beef jelly, and milk substituted; discharge from the mouth less; bowels open yesterday. Temperature and pulse normal.

13th.—The tracheotomy-tube was left out yesterday, and the opening covered with a piece of lint. There was a rise of temperature this morning to 100·4°, after a somewhat restless night; pulse 104, regular. The liquid food is taken easily by the mouth, without the feeding-tube. Patient is able to speak a little, though very indistinctly. The quantity of brandy is reduced to two ounces in the twenty-four hours.

17th.—The patient is able to get up for several hours daily; he now takes some solid food, as fish, eggs, and bread-and-butter, though there is some difficulty in masticating it; hardly any discharge from the mouth; no pain in swallowing or in speaking; articulation more distinct; tracheotomy wound nearly healed.

20th.—He is doing well, though still feeling very weak. He was put upon ordinary diet to-day, with a pint of milk, a pint of beef jelly, a pint of beer, and two eggs. Tongue clean; no discharge. Bowels open once in two or three days. Tracheotomy wound healed. Temperature a little below normal; pulse 65, weak.

25th.—The patient feels weak, but his condition is quite satisfactory. Articulation is indistinct, but what he says can be quite well understood. There has been no bad symptom from the time of the operation. He left the hospital to-day for a convalescent home at Eastbourne for a few weeks.

The excised portion of the tongue, examined microscopically, showed true epithelioma, with a good deal of inflammatory tissue, thus confirming the diagnosis.

The patient was seen by Mr. Page a few weeks later; he was then quite well; no enlarged glands detected, and his speech fairly distinct. He was going to return to his work.

MANCHESTER ROYAL INFIRMARY.

CASES ILLUSTRATIVE OF RENAL SURGERY.

(Under the care of Mr. W. WHITEHEAD.)

(*Continued from p. 291.*)

CASE 5. *Renal Calculus; Examination of Kidney.*—J. R——, aged twenty-three, a farmer, was admitted to the Royal Infirmary on July 1st, 1884. He had complained since he was seven or eight years of age of severe paroxysmal pain in the region of the left kidney, which came on quite suddenly, and frequently repeated itself during the day and night. About five or six years ago he passed a large quantity of blood in his urine after riding on a mowing machine. Often his urine was dark and smoky, and deposited at the bottom of the vessel a quantity of red sandy material.

On admission he was troubled frequently with pain in the region of the left kidney. The urine was acid, sp. gr. 1028, and contained a little blood and mucus. Some days it was quite free from blood. Various internal medicines and external applications were tried, but with no beneficial results; so on Aug. 7th, 1884, he was put under chloroform, an oblique incision about two inches long made at the outer border of the erector spinæ, and the kidney examined. As far as could be ascertained, the organ was of normal size and no renal calculus could be felt. A drainage-tube was inserted and the edges of the wound united by silver sutures. The pain continued after the operation very much as before, and he was sent to the convalescent hospital on Sept. 20th, 1884, in *statu quo*.

CASE 6. *Renal Calculus; Exploration of Kidney.*—H. H——, aged forty-four, was admitted to the Royal Infirmary on Sept. 1st, 1884. For the past three years he had suffered from paroxysmal pain of great severity in the region of the right kidney, which radiated towards the testicle of that side and towards the end of the penis. The pain, though liable to paroxysmal increase, frequently remained persistent for some time. He had on several occasions passed blood in his urine, and once or twice had noticed that his urine deposited a gritty sediment. Lately he has had a good deal of pain and tenesmus on defecation.

On admission the patient complained of severe pain in the region of the right kidney and of frequency of micturition. The urine was strongly acid, and contained much blood and pus. No stone could be detected in the bladder.

On Sept. 25th he was put under chloroform and the right kidney explored by means of an oblique colotomy incision. The organ appeared somewhat enlarged, but nothing definite could be detected. An exploring needle was also introduced into the substance of the kidney, but with negative results.

After the operation he seemed better; there was very little pain, and much less blood and pus were passed in the urine. About a month after the operation he began to pass a small amount of urine through the wound in the loin. The discharge of urine through this channel only ensued when he was lying down; when standing up the dressings remained quite dry, and had no urinous odour.

On Nov. 10th he was still occasionally passing urine through the wound, but had no pain, and only occasionally a small quantity of blood in the urine, with but a trace of pus. He then went home, and has since been lost sight of.

CASE 7. *Renal Calculus; Removal; Recovery.*—J. D——, aged thirty-nine, was admitted to the Royal Infirmary on Nov. 24th, 1884. About twelve years previously he had been seized with a severe attack of renal colic, and afterwards passed three or four small stones per urethram. Afterwards, for two years, he was free from pain, but then began to have pain at the end of the penis and frequency of micturition. These symptoms have persisted, being more or less constantly present up to the time of admission. About sixteen months ago the right testicle swelled without apparent cause; an abscess formed, which, bursting, continued to discharge pus for three months; it then healed up, leaving a small scar, which is still to be recognised. For the last twelve months the pain and frequency of micturition have been especially troublesome. About three weeks before he came to hospital he passed about an ounce of blood in his urine on three consecutive occasions.

On admission he complained of pain at the end of and along the penis, with frequency of micturition; he had then no pain in the lumbar region, but said it came on if he attempted to work. The urine was of neutral reaction, sp. gr. 1015, and contained a small amount of pus, but no blood. No vesical calculus could be detected.

On Dec. 17th, 1884, an incision was made in the right lumbar region, such as is employed for colotomy. A stone was felt in the pelvis of the kidney, and that part having been incised with a hernia knife, the calculus was removed, but it was so friable that it crumbled up in the attempt to remove it entire; a considerable amount of pus and gritty matter also came away.

After the operation he had no pain in the region of the kidney, but the pain in the penis persisted, as did also the frequency of micturition. Urine continued to be discharged through the wound in the loin for some time. By rectal examination it was found that the prostate was much enlarged and very tender; it was considered probable that this was due to tuberculous deposit, and that it accounted for his bladder symptoms.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

Treatment of Stricture by Internal Urethrotomy.

AT a meeting of the Surgical Section on May 22nd Mr. THORNLEY STOKER read a paper on the Treatment of Stricture by Internal Urethrotomy. He advocated the more frequent use of that operation in cases of well-established organic stricture, where recurrence took place after gradual dilatation, where that treatment could not be borne owing to the irritation it set up, or where the circumstances of the patient demanded speedy relief. He had burst eighteen strictures in his earlier practice, and had been so impressed, both by his own cases and those of other surgeons, with the liability to rapid recurrence after this operation, that he had relinquished it in favour of urethrotomy. He had cut twenty-five cases with Maisonneuve's instrument, and had in no instance had a bad result or cause for grave anxiety, except in one case where somewhat severe hæmorrhage took place and required the retention of a large catheter in the urethra.—The PRESIDENT believed most surgeons would concur in Mr. Stoker's opinion that internal urethrotomy should replace the forcible laceration of the urethra. For his own part, he would not incur the risk of dealing with stricture by forcible rupture. One of the advantages of Civiale's instrument was that the surgeon could divide with it either above or below.—Dr. BARTON said that, contrary to Mr. Stoker's view that gradual dilatation was a temporary measure and in the ultimate result unsatisfactory, his own experience was that it was the best treatment if it could be adopted; and year by year, as he treated more difficult cases, he found its scope and range greater than he at first supposed. Indeed, he was convinced there was but a limited number of cases that could not be treated by gradual dilatation, if only the surgeon possessed patience as well as dexterity. Again, despite Mr. Stoker's remark that internal urethrotomy was not a dangerous procedure, he had seen fatal results follow. He agreed, however, that that method gave more rapid results, but not more permanent. There were cases in which gradual dilatation could not be adopted, and in which the surgeon had to choose between bursting and internal urethrotomy. His choice in such cases would be in favour of internal urethrotomy. Both were open to risk, and could not be compared with dilatation. Again, there were other cases requiring external urethrotomy.—Mr. STOKES said the subject was one which for a number of years had engaged his attention. In 1864 he introduced into Dublin Maisonneuve's operation, which he had learnt from the distinguished French surgeon himself. Although Mr. Stoker was apparently unaware of the fact, he had published papers in the *Medical Press*, the *Dublin Medical Journal*, the *British Medical Journal*, and other periodicals, in which he fairly put forward the alleged advantages of that operation. Speaking from an experience of sixty-seven cases during the past twenty-one years, although his opinion of internal urethrotomy was still very high, he did not think it should be looked upon as a royal road to the cure of urethral stricture. It was the best mode of internal division of the stricture. But he agreed with Mr. Barton that the chances of recurrence of the disease were not greater after the old and the safer treatment of gradual dilatation. Mr. Stokes also thought it better to retain a catheter in the urethra for some time after the operation, otherwise the recurrence of the stricture was, as a rule, rapid. In reference to the mode of division, he agreed with Mr. Stoker in thinking the upper wall of the urethra was the best to be divided, not only for the reasons he put forward, but also those of Maisonneuve, that there was much less danger of any lodgment in the urethra or any infiltration taking place after the operation when the upper wall was divided than when the lower one was. By passing in a large well-oiled bougie immediately afterwards, the sides of the wound were dilated, assuming a triangular or conical form, with its base below and apex above. This became filled with lymph, and a wedge-shaped cicatrix formed, which was not at all likely to take place if the wound was allowed to close after the division of the stricture. Notwithstanding the favourable results he had had, out of the sixty-seven cases there were only ten in which he was able, after a considerable period, to determine that no recurrence of the stricture had taken place. He had performed the operation on the same individual twice, and yet there was a recurrence of the stricture, which he subsequently treated by gradual dilatation. He believed with Mr. Barton that although dilatation was the most tedious, it was certainly the safest method; and he also agreed with him, with Hutton, and Prof. Smith, in maintaining that there was a better chance of absorption of the new material by the steady, continuous, gradual pressure caused by the frequent introduction of the instrument, than by any cutting operation whatever. It was dangerous to advocate the operation of internal urethrotomy to the exclusion of the slower and safer method of gradual dilatation.—Mr. ORMSBY observed that the treatment depended more on the patient than on the stricture, some being suitable for one and some for another method. Every surgeon agreed that gradual dilatation, where it could be performed, was the best method. But if the patient wanted to have the treatment carried out rapidly and efficiently, internal urethrotomy with Maisonneuve's instrument afforded the best result. Mr. M. Colles had stated that all strictures were liable to return. As an instance, he mentioned, in his own practice, the case of a man who had had Holt's operation performed at one hospital, Richardson's at another, and Maisonneuve's at a third. It was therefore probable, no matter what method was adopted, that the stricture would recur if the patient did not take the precaution either of going at once to a surgeon or providing himself with a bougie to pass occasionally.—Dr. BALL pointed out that in the use of Maisonneuve's instrument there was danger of injuring other portions of the urethra by the sharp edge of the knife. He knew of a fatal case in which the post-mortem examination showed that the entire length of the urethra from the meatus to the bladder was slit with the instrument, the wound being deepest in the healthy parts. That danger, however, was obviated by a modification invented by Teevan of London—namely, a triangular sheath over the cutting edge.—Mr. CORLEY spoke from twenty-seven years' experience, since he was a pupil of the late Mr. Taggart, who was a thick-and-thin advocate of gradual dilatation as the safest method, and was so particular and careful that he would have the word "gentleness" inscribed on the handle of every catheter that the junior practitioner used. With his experience of the three methods he had come seriously and fairly to the conclusion that the cutting operation, as done by Maisonneuve, was the best and safest, and obviated a number of inconveniences that certainly belonged to gradual dilatation. There were several cases met with in which a long period of trial occurred before getting in the catheter; for instance, one in the Richmond Hospital, given up as hopeless after six weeks, when Mr. Stokes succeeded in introducing a catheter.—Mr. THOMSON said the real question to decide was whether stricture was curable, or, rather, how near could they approach to the condition of getting rid of the possibility of its return. All the speakers agreed that strictures returned whether the operation was one of cutting or of bursting, although some surgeons had invented appliances which they claimed cut the strictures so as to prevent their return. Mr. Corley had stated an important point—that they were not to consider gradual dilatation as a method altogether free from risk. He had himself seen a patient who, on the introduction of a catheter, was seized with uræmic convulsions, and died of suppression of urine. The same happened after internal urethrotomy in a case of his own. Therefore, they were not to base objection to a line of treatment on the fact of a death occurring now and again. But the question was this, When the surgeon came to deal with a case of stricture, what method was the best for the patient, what gave the least risk, and what gave the best chance of staving off the evil day? In the great majority of cases dilatation was that method. It was essentially the least irritating, if properly carried out. By using a cutting instrument, a severe wound was inflicted upon a very sensitive part, with the risk of setting up irritation of the sympathetic, which so often followed cutting operations. Hence the advantage of gradual dilatation. But there were cases in which no amount of gradual dilatation was satisfactory. There was a form of stricture which might be dealt with by urethrotomy, internal or external, as not usually yielding to gradual dilatation—namely, traumatic stricture. So, too, a case suffering from rigors after the bougie would be well treated by internal urethrotomy, no greater disturbance being

caused than by the passing of the bougie. As to methods of cutting, he was entirely in favour of Maisonneuve's.—Mr. WHEELER said recent cases were suitable for gradual dilatation, but old callous strictures were not. He could not concur in the statement that the return of contraction was more rapid after divulsion than after internal division. When there was rapid contraction it was, because there had not been sufficient dilatation by which the stricture would be fairly ruptured. Contraction did not occur more rapidly after this treatment than after internal urethrotomy.—Dr. FALCONER suggested that a drug recently brought before the profession—namely, cocaine—should be injected into the urethra before operating, instead of placing the patient under an anæsthetic.—Mr. HAMILTON said Mr. Stoker had not removed from his mind two convictions impressed upon it by observation and practice: one, that a stricture once formed could never be removed; and the other, that the vast majority of strictures were amenable to, and ought to be treated by, the process of gradual dilatation. He was in the habit of teaching his class and telling the patients that no matter what plan was adopted the stricture would return. His experience was, that he was able to succeed with gradual dilatation in ten days or a fortnight. The object was to get an instrument first, no matter how small; and he maintained, with Syme, that there was no stricture through which a surgeon could not pass an instrument, if he only had the patience, and, above all things, gentleness.—Mr. THORNLEY STOKER, in reply, said his paper, read over again, would answer most of the objections raised, and therefore he would leave it to answer for itself. In reply to the President's question, he advocated the incision of the roof of the urethra in preference to the floor, because he considered he was cutting into healthier tissue. It was matter of observation to those who dissected diseased urethræ that the floor was much more frequently the seat of disease than the roof. That gradual dilatation was the safest method of treatment no man of common sense could for a moment deny, or that it was the method applicable to the greater number of organic strictures. But he contended that urethrotomy might be more generally practised than at present.

Reviews and Notices of Books.

The Regimen to be adopted in cases of Gout. By Dr. WILHELM EBSTEIN. Translated by JOHN SCOTT, M.B. London: J. and A. Churchill. 1885.

Gout and its Relations to Diseases of the Liver and Kidneys. By ROBSON ROOSE, M.D. London: H. K. Lewis. 1885.

A Treatise on Gout and Rheumatism. By PETER HOOD, M.D. Third Edition. London: J. and A. Churchill. 1885.

WORKS on gout multiply upon us, in spite of the fact that the disease in its acute and frank form has considerably diminished during the present century. This attention to a disease which in its typical aspect is continually becoming rarer can only be accounted for by the supposition that the humoral pathologists of the present day regard uric acid as dominating nearly all the chemical processes going on within the body. Of late, it is true, symptoms of revolt have shown themselves against the hypothesis of uric acid being the keystone of chemical pathology, and some writers have ventured to point out that mere variations in reaction of the blood, or the presence in excess or diminution of one or other of the principal alkaline bases of the organism, may cause profound disturbance in the chemistry of nutrition, and give rise to conditions very similar to those that are commonly called gouty.

In the works before us, however, we are pleased to find the authors mainly confine themselves chiefly to a consideration of true gout, such as is characterised by the actual deposit of sodium urate, and we are spared those purely hypothetical disquisitions on the "gouty" state which of late have become rather too prominent. With regard to the first author on our list, we find that Ebstein does not regard increased formation of uric acid as adequate to explain the development of the whole range of gouty symptoms, nor does he think Garrod's theory of the retention of uric acid can be maintained. His view may be briefly stated as follows: In gout there is an anomalous formation of uric acid occurring especially in the muscles and medulla of the bones; if, then, any hindrance occurs to the circulation of the fluids of the body, such hindrance shows itself by the deposition of uric acid and its salts in those parts of the body which are most distinguished by the slowness of their circulation, such as the small joints, cartilages of the ear, &c. The effect of the hindrance of circulation in causing gouty deposits he aptly illustrates by quoting Charcot's observations on a patient with hemiplegia, in whom the majority of the joints on the affected side were found infiltrated with uric acid salts. Ebstein, however, does not allude to the other factor, which plays, with retardation of the circulation, an important part in the phenomena of a gouty attack—namely, diminished alkalinity of the blood, a condition which renders the highly insoluble uric acid salts still more insoluble, and thus brings about their deposition. Ralfe, in this country, has especially insisted on the part played by diminished alkalinity of the blood in the causation of uratic deposits; whilst Virchow, in views recently expressed with regard to the evolution of the gouty kidney, is disposed to relegate uric acid to quite a secondary place, since, as he points out, the chronic inflammatory changes begin in the cortex at a distance from the seat of the deposit of urates in the straight portion of the tubes, from which he argues that the primary step in the process is the exudation of highly acid urine, which induces interstitial nephritis, and it is not till the function of the kidney in getting rid of uric acid is impaired that uratic deposit occurs. Ebstein reviews carefully the various dietetic systems that have been proposed for the treatment of gout, which are as various as the views advanced to explain the causation of the disease. Ebstein's own view is thus concisely expressed: "Sweets apart our gouty friend may be as ticklish as he likes, but he must never be a glutton"—a conclusion in close accordance with that expressed by Sydenham two centuries ago, in the following words: "Therefore moderation in eating and drinking is to be observed, so as, on the one hand, to avoid taking in more aliment than the stomach can conveniently digest, and of course thereby increasing the disease; and, on the other hand, defrauding the parts by immoderate abstinence of the degree of nourishment requisite to keep up the strength, which will weaken them still more." An opinion in which we heartily concur.

Dr. Roose is fully convinced that functional disorder of the liver underlies the majority of gouty manifestations, and that the kidneys are only secondarily implicated. This view, which Murchison supported in his famous Croonian Lectures on Functional Derangements of the Liver, has of late been questioned, since it has been shown that uric acid is not necessarily an antecedent of urea in the body. Indeed, as stated above, the view is gradually but steadily gaining ground that the chief significance of uric acid in relation to gout refers rather to the conditions that increase its insolubility—such as local stasis and diminished alkalinity of the blood—than to its increased production in the system; and it is to this view we ourselves most incline. Dr. Roose's work, however, is a clear and concise statement of the opposite doctrine and as such deserves attention.

Dr. P. Hood's work is already well known, having reached a third edition. He, too, is a supporter of the view that "uric acid is the penultimate and urea the ultimate product of oxidation," and believes that excess of uric acid in the blood and textures depends on excess of animal or vegetable albuminous tissue or on arrest of oxidation. As stated above, uric acid is not a necessary antecedent of urea; indeed, there is good evidence to show that the probable

antecedents are partly kreatin and partly leucin. Indeed, Parkes' observation that uric acid can always be found in the blood after all nitrogenous food is cut off is fatal to the defective oxidation theory. When the nitrogen is cut off and oxygen is consequently in excess, *all* the uric acid should be converted into urea, if its origin in the body was derived from uric acid—but this, as Parkes has shown, is not the case. Dr. Hood's work, however, is excellent as a practical treatise on the disease.

Comparative Anatomy and Physiology. By F. JEFFREY BELL, M.A. Illustrated with 229 Engravings; pp. 555. London: Cassell and Co. 1885.

THIS volume constitutes one of the admirable series of handy works for the student which are in course of issue by Messrs. Cassell and Co. The task which has been undertaken by Mr. Bell is a very difficult one. To give even a condensed view of the general structure of the animal kingdom in the compass of a small work necessarily involves the omission of many details, and the intelligence of the author is shown by the skill with which he seizes the main types of structure and organisation, and the power he possesses of describing their peculiarities as clearly and as concisely as possible. In these respects we think Mr. Bell has achieved a success. He commences his work with a brief account of the general structure of animals. When the student has mastered this he is introduced to the several functions—as those of digestion, circulation, respiration, secretion, movement, voice, nervous activity, and reproduction. Whenever we have opened the book and have read a few sections, it appears to us to be clearly and instructively written, and to be perfectly correct. We commend it to our younger readers.

OUR LIBRARY TABLE.

The Pathology and Treatment of Stricture of the Urethra and Urinary Fistulæ. By Sir HENRY THOMPSON, F.R.C.S., Surgeon Extraordinary to H.M. the King of the Belgians, Consulting Surgeon to University College Hospital, &c. Fourth Edition. London: J. and A. Churchill.—A new edition of this standard work on Stricture of the Urethra has been wanted for some time, and we are glad to find that the author has, in preparing it, made such changes as will commend it to even a larger circle of readers than it had before. The volume is considerably reduced in size, a change which we are not often privileged to notice in successive editions. The illustrative cases which were scattered through the text of the former editions have been omitted, and most if not all readers will appreciate this change. We notice several new woodcuts. The author's views on stricture of the urethra and its treatment are so well known, and have so recently been especially presented to the profession in his lectures at the College of Surgeons, that it is wholly needless for us to refer to them here. It suffices simply to notice the issue of this work, which will be surely welcomed by all surgeons interested in the affections dealt with in it by Sir Henry Thompson.

Popular Papers on Practical Nursing. By HERBERT R. MOSSE, M.B., M.R.C.S. London: Hutchings and Crowsley. 1885.—We may take it as a sign of the vitality of any art that it sooner or later gives rise to a literature of its own. Even the nurse's office, though so practical in its details, offers no exception but a recent and prominent example of this rule. It is satisfactory that descriptive works on this subject show for the most part a harmonious fidelity to matter of fact in dealing with theory and with practice. This much at least may be said of the small volume under notice. The advice which is here offered to intending nurses is as varied as it is exact, and clearly stated. It is sufficiently full in the subjects of which it treats, without being tedious, and is conveyed in a pleasant and flowing style. Traversing a considerable area in ten rather short chapters, this pamphlet cannot be expected to enter fully into every point of hygiene or hospital method with which it has to do. It does, nevertheless, acquaint its readers in a very fair degree with most essentials connected with nursing. Useful hints on ventilation and the warmth of rooms are to be found in it. Bed-making receives especially careful attention, the different methods employed and the reasons for their use being shortly and well described. The application of local remedies is similarly treated. More might perhaps have been said about the cold wet compress. It seems to us also unfortunate that no recommendation is given to cover hot poultices with waterproof material, since by means of this simple addition the convenience and efficacy of poulticing are much enhanced. Some very sensible remarks on the diet of infants may be specially pointed out to mothers and monthly nurses. Most of us, however, will probably take exception to the routine use of lime-water as here advocated, apparently without regard to the varying action of the bowels. A chapter on the attitudes, aspects, and gestures of the sick is worthy of study. Baths, albeit antiseptic, are somewhat too freely advocated in scarlatina, though guarded by a caution; and some may think, not without reason, that the administration of croton oil and sulphate of zinc by the mouth were better not so freely entrusted to the readers of these popular tracts. Despite its few faults, which are not serious, this work, we repeat, contains within its small compass much carefully digested experimental knowledge.

How to Avoid being Drowned; or all about Flotation. By F. W. BREWSTER, M.A., Trinity College, Cambridge. London: Roberts and Leete. 1885.—With the author's remark in the preface to this little book, that "any information which proves that the immense annual loss of life by drowning is unnecessary and easily obviated cannot fail to be of universal interest and welcome alike to all grades of society," we cordially agree. The word "obviated" requires, perhaps, a little modification, but there can be surely no reason why each recurring summer should prove to be a "drowning season," with a terrible death-roll lengthening day by day. We welcome, therefore, Mr. Brewster's efforts to make clear to the ordinary reader some scientific facts which it is very desirable should be plainly understood. This task is not altogether an easy one, but by means of simple explanations and clear (if somewhat roughly drawn) illustrations is satisfactorily accomplished. Chapter 3 is devoted to the principles of *displacement*. In the next chapter dealing with "the human body immersed," the author complains of the great difficulty he experienced in getting information as to an average human being's floating weight from the sources where one might naturally expect to have obtained it, and also of his ill success on reference to books, detailing the experiments he conducted to obtain the desired knowledge. In Chapter 6 the best and worst kinds of artificial flotation are shown, as well as the uselessness of the ordinary circular life-buoy to those unacquainted with the proper way of getting into it, and the dangers of floats improperly lashed to the body. The last chapter deals very severely, and not altogether without reason, with the inefficiency of the requirements of the Board of Trade as to life-buoys and life-belts to be carried at sea. In this connexion we may say that this little book is worth the attention of the members of the Royal Commission on Loss of Life at Sea. The importance of a knowledge of swimming is of course duly insisted on, some valuable hints being given to those who can swim and also to the novice. Information is likewise afforded with regard to the most convenient shape and material of bathing-dress. The appendix consists of the Royal Humane Society's directions for restoring the apparently dead.

Commercial Organic Analysis. By ALFRED H. ALLEN, F.I.C., F.C.S., Public Analyst for the West Riding of York-

shire, the Northern Divison of Derbyshire, &c. Second Edition, revised and enlarged. Vol. I. London: Churchill. 1885.—This much wanted and excellent treatise has, as might have been expected, rapidly reached a second edition. The author has taken the opportunity to remodel its plan, enlarge its scope, and correct its few inaccuracies. The two volumes have swollen into three, of which one is before us, the second in the press, and the third will shortly follow. In the new arrangement, which is much more convenient than the old, the first volume is devoted to general considerations, such as physical determinations, ultimate analysis, and the like; the alcohols and ethers, the carbohydrates, and a certain number of vegetable acids, among which acetic and tartaric occupy the chief places. The second volume will contain hydrocarbons and tar products, fixed oils and tannins; and the third, the cyanogen series, organic bases, the albuminoids, &c. We must congratulate Mr. Allen on the great success of a book so well calculated to assist in the advance of applied chemistry.

The Journal of Anatomy and Physiologie. Conducted by Profs. E. M. HUMPHRY, W. TURNER, and J. MCKENDRICK. Vol. XIX., Part 4. 1885. Macmillan and Co.—This part contains the following memoirs:—1. An Account of some recent Experiments on the Effects of very Low Temperature on the Putrefactive Process, and on some Vital Phenomena, by J. Coleman and J. McKendrick. 2. Accessory Lobe to the Left Lung, by Laurence Humphry. 3. Case of Abnormal Development of the Reproductive Organs of the Frog, by A. F. S. Kent. 4. Rotation and Circumduction, by Professor Thomas Dwight. 5. Movements of the Ulna in Pronation and Supination, by C. Cathcart. 6. Anatomy of a Hydromicrocephalous Brain, by Alex. Hill. 7. Corpus Callosum of the Adult Human Brain, by Professor Hamilton. 8. Tumours in Animals, by J. B. Sutton. 9. Hyomandibular Clefts and Pseudobranchs of Lepidosteus and Amia, by Professor Ramsay Wright. 10. Anatomy of Spina Bifida, by Professor Humphry. 11. Notes on some Variations of the Shoulder Muscles, by W. B. Ransom. 12. Tarsus and Carpus, by Professor V. Bardleben. This part also contains the index of Vol. XIX.

Archiv für Anatomie und Physiologie. Heft. III. & IV. Herausgegeben von Dr. W. HIS und Dr. W. BRAUNE. Jahrgang, 1885. Leipzig: Von Veit and Co. London: Williams and Norgate.—*A. Anatomishe Abtheilung.* This part contains the following memoirs:—1. F. Graf. Spee: Observations on the Movements and Agents of Movement of the Villi, with a plate. 2. Johann Topken: An Essay on the Exact Position occupied by the Heart in Man, with two plates. 3. Max Flesch: On the Pronation and Supination of the Hand. 4. Walther Flemming: On the formation of Directive Figures in the Ovum of Mammals after the Rupture of the Graafian Follicle. 5. M. Gottschav: Two Rare Varieties of the Branches of the Aortic Arch. 6. Hermann von Meyer: The Mechanism of the Ribs, with special relation to the Action of the Intercostal Muscles. 7. J. Kollmann: General Points in the Development of Vertebrata, with a plate.—*B. Physiologische Abtheilung.* 1. K. Hällsten: On the Sensory Nerves and Reflex Apparatus of the Spinal Cord. 2. C. Holzmann: On the Coagulation of the Blood. 3. G. Sandmann: On the Termination of Motor Nerves. 4. Benno Baginsky: On the Physiology of the Semicircular Canals. 5. Hans Aronson: On Apnœa in Poikilothermata and in New-born Mammals. 6. Otto Moszeick: On the Influence of Temperature on the Absorptive Capacity of Animal Charcoal 7. O. Langendorff: On Electrical Excitation of the Heart. 8. Maurice Mendelssohn: On the Irritability of the Spinal Cord. 9. A. Rawa: On the Effects of Section of Nerves having Different Functions. The number also contains the Transactions of the Physiological Society of Berlin in 1884-85.

Archives Italiennes de Biologie. Sous la direction de G. EMERY et A. MOSSO. Tome 6., Fasc. 3. 1884.—This part contains the following papers:—1. Plants inhabited by Ants of the Indo-Malayan Archipelago, by O. Beccari. 2. A Case of Congenital Cataract operated on at the Age of Twenty-one, by J. Albertotti, with a figure. 3. On the Action exerted by Dilute Hydrochloric Acid on the Nerves, by C. Negro, with three figures. 4. Observations and Experiments on Pneumocogues and on a Grave Complication of Pneumonia, by P. Foa and G. Rattone. 5. The Physiopathology of Stratified Pavement Epithelium studied in Perforating Ulcer of the Foot, by G. Tizzoni. 7. Some Experiments on the Pathogenesis of Albuminuria, by the same writer. 8. A Contribution to the Study of Albuminuria, by A. Riva. 9. Some Experiments on the Presence of Albumen in the Saliva and Bile of Albuminurics, by F. Brancaccio. 10. On the presence of Albumen in Saliva, by M. Dessalles. 11. On the Central Termination of the Optic Nerve in Mammals, by J. Bellonci, with a plate. 12. On the Influence of Chloral on Gastric Digestion, by A. Fiumi and A. Favrat. 13. Blennorrhagic Folliculitis in Man, by R. Campana. 14. Anatomical and Clinical Researches on the Cataract of Morgagni, by F. Falchi. 15. Congenital Microphthalmia, by F. Falchi.

Revue des Sciences Médicales, No. 51. Paris: G. Masson. *Index Bibliographique,* Vol. I. for 1883. Paris. — The value of these works of reference is very great to the numerous band of workers in medical literature. The "Revue" gives selections of the best papers; the "Index" is more extensive, but gives less information. It is most essential that the references in works of the kind should be accurate, otherwise considerable annoyance is given. So far as we have had occasion to make use of the volumes, we have found them truthful. With the Index Medicus, Neale's Digest, and such works as the above, the labour of literary work is much lightened.

THE VOLUNTEER MEDICAL STAFF CORPS AT ALDERSHOT.

SINCE the notice of this corps given in our last week's issue there has been much instruction given and a great deal of hard work got through. On Thursday the corps was formed into two companies. No. 1, under Surgeon-Major Norton, joined the northern force; No. 2, under Surgeon Platt, joined the southern force. Each company took part in the great field day and in the march past. The work during the day was of a most trying character, but the men got through it creditably, and the march past was executed with precision. On Friday morning, at 6.30, loading and unloading waggons was practised. At 9 A.M. the Regular and Volunteer Medical Staff Corps paraded and marched to the foot of the Redan Hill, where they pitched a field hospital, and where pharmacy and surgical waggons were exhibited and displayed. Considering the fact that the field hospital had never been pitched in England before 1882, it was a great thing that this newly formed corps should have had an opportunity of becoming familiar with the work, and to actually pitch one at so early a period in its career. On Saturday morning, at 6 A.M., the corps marched to the railway station, where practice in loading and unloading railway waggons according to Zudolski's method was gone into. Before the corps left Surgeon-General Hendley, C.B., addressed a few congratulatory words to the corps, and Surgeon-Commandant Cantlie, in the name of the officers, presented Corporal Watts of the London Hospital with a beautifully executed silver medal, as a reward for having the best-kept tent during the week. In addition to the officers mentioned as being at Aldershot for instructions, there were Surgeon Casson, in command of his company, Surgeons Willett, Sutton, and Moberley, and Quartermaster Robertson, all of whom took part in the arduous duties of the week.

THE LANCET.

LONDON: SATURDAY, AUGUST 22, 1885.

THE Report of our Special Commissioner on the Sanitary Condition of Windsor, which we published in our last week's issue, has, we learn from the *Standard*, created considerable excitement in the Royal borough, and a requisition to the Mayor asking him to convene a public meeting of the rate-payers at an early date has been prepared for signature by the residents, many of whom "have read the statements with great pain and astonishment." The object of the meeting, we are told, is that an opportunity may be afforded for "refuting the truth of the charges which have been made, and of taking such steps in relation thereto as may be considered necessary." We are not surprised to find that the inhabitants of Windsor are ignorant of the conditions which surround them, seeing that the sanitary authority themselves appear to have omitted to adopt the only method by which these conditions can be brought to light. An account of a recent meeting of the Windsor Town Council, which is published in local newspapers issued last Saturday, reports that the Mayor stated that it is not the duty of the authority to discover nuisances in private houses; their duty consists in remedying them, or causing them to be remedied, when they are brought to their notice. He felt it his duty to warn his fellow-townsmen against the growing disposition there is to lay stress on the retention of bodily life and health to the absolute exclusion of other high considerations; it seemed to him that this must bring about national degeneracy! Such is the opinion of the chairman of the sanitary authority; it is, then, not a matter for surprise that the sanitary improvement of Windsor makes but slow progress. It may not unreasonably be asked, If the sanitary authority by themselves or their officers are not to seek for nuisances, how are these to come to the knowledge of the authority for the purposes of abatement? Experience has taught again and again that the inhabitants of tenemented houses and other dwellings occupied by the poor cannot be trusted to make the complaint which is regarded as necessary; their own apathy and ignorance, their fear of creating a hostile feeling in the mind of their landlord, are alone sufficient obstacles to their acting in this manner. Again, it is beyond all reasonable expectation that the landlord shall himself complain of his own delinquencies. In Windsor, therefore, there is no prospect of any improvement of the conditions described by our Commissioner if the sanitary authority are to adopt the views enunciated above. One of the objections urged to the proposal of Sir JOSEPH DEVEREUX, the late Mayor, that a house-to-house visitation should be made, was that the time of the surveyor was sufficiently occupied by his other duties, and that were they to be increased it would lead to the neglect of those which already devolve upon him. The suggestion that the size and the condition of Windsor were such as to necessitate the employment of a special sanitary inspector does not appear to have occurred to a single member of the Windsor Town Council.

But as the object of the meeting which the inhabitants propose to hold is to give public denial to the statements of our Commissioner, it would, perhaps, be desirable in the first instance for the townspeople to assure themselves that those statements are without foundation before their correctness is denied. The medical officer of health has been at pains to show that the sanitary authority are not negligent of their duty; but his letter omits mention of some important points to which our Commissioner had directed attention. It is, indeed, impossible for the state of houses in the courts to be appreciated until each has been carefully inspected. We cannot believe that the condition of all the houses in Garden-court can be known to Dr. CASEY, if he is satisfied that the active interference of the sanitary authority is not required. In one house in that court, visited by another of our Commissioners as recently as this week, the ceilings were found to be dirty and bulging, the floors broken and in holes, the walls disgracefully dirty, the plaster dropping and exposing the laths and brickwork, while the assurance was given by one of the inmates that the house was "swarming with vermin," and this within a stone's throw of the Royal residence. If such a house is not regarded as unfit for human habitation, how low must be the standard of humanity in Windsor? Indeed, a further inspection of the town enables us, if necessary, to add to the catalogue of sanitary defects which have already been published in our recent article. It is enough for us now to reassert that the Town Council must be held responsible for leaving the borough without the means of isolating cases of infectious disease, and for permitting the existence of a state of affairs which no active sanitary authority would tolerate. The Council cannot at the present moment plead that their attention has not been fully directed to the sanitary wants of their town. These were sufficiently detailed in the columns of the *Builder* in the year 1871, and have since that time been prominently kept under their notice by the rector of one of the parishes in which the most insanitary localities are situated, and are, again, condemned by our Commissioner, who has from personal observation found that the complaints with regard to them are but too well founded. It remains to be seen whether the authority will limit their action to attempting to disprove the statements we have felt it our duty to make, or whether they will utilise the ample powers they possess for developing much more fully than hitherto the health capacity of the Royal borough.

PATHOLOGICAL science has always been more or less governed by some dominant idea. At one time it was the blood and fluids of the body; at another the action of the bloodvessels; at another that of the nerves, in which men saw the initial stages of morbid change. The autonomy of the cell and the share taken by cell life in pathological processes replaced the older theories, and now the idea of parasitism seems to overshadow all. The cell theory is becoming subordinated to the operation of microbes, and diseased action is coming to be regarded as the expression of the vital resistance of the tissues to the invasion of external organisms. Professor VIRCHOW, in an article entitled "The Strife between Cells and Bacteria" (*Archiv. der Path. Anat.*, Bd. 101, Heft 1), points out that in spite of the modern

advances in bacteriology, the cell doctrine is by no means extinguished. Indeed every new discovery tends, he thinks, to confirm the truth that the whole work of the body, and all the changes it undergoes in disease, are the result of the special activities of the cells that compose the organism. Each cell may be regarded as an individual, and every discovery that demonstrates the independent activity of the cell strengthens this doctrine. Thus the discovery of the mobility of cells and of the facts of cell migration did not displace the cell theory, as some think, but merely widened its conception. The matter is somewhat different with the new ideas concerning the influence of micro-organisms; and it becomes a question how far the older view of cellular activities will have to be modified by the introduction of the notions of parasitism. VIRCHOW accordingly traces the development of this, the etiological, side of pathology, which he admits had been much neglected. The notion that fungi could produce disease arose out of the discovery by BASSI of the muscardine disease of silkworms in 1835, of the fungus of favus by SCHÖNLEIN in 1839, and that of thrush by JUL. VOGEL in 1841. Some pathologists—notably HENLE—generalised upon such scanty facts, and propounded a theory of disease based on parasitism, which went beyond even our present knowledge. Facts, however, accumulated but slowly; for although the life-history of the ordinary fungi was known, that of the large group of schizomycetes was ignored or misinterpreted. EHRENBERG classed bacteria among the infusoria, and their vegetable nature was for long in doubt. Again, in those days there were none of the powerful microscopic appliances now in vogue, no idea of "cultivations," none of the methods of staining which are now employed—for, indeed, the staining reagents were not then discovered. Moreover, the ubiquity of these micro-organisms, their presence in every drop of water or bubble of air, may have been one reason why they were overlooked as causes of disease.

Professor VIRCHOW relates an example of this oversight from his own experience in cholera investigation. In the first fatal cases of the epidemic of 1848 he detected "numerous vibriones" in the intestines, and noted the absence of any such foreign matter in the blood. He found in choleraic evacuations "vibriones and ciliated monads," but could determine no special forms, and concluded that their presence was due to decomposition. It is possible, he remarks, that these "infusoria" were identical with comma bacilli, but twenty years later he found, in a case of arsenical poisoning with choleraic symptoms, that the large intestine contained "masses of bacteridia and vibrios corresponding with those described by KLOB and others as cholera fungi." In 1868 he wrote to the effect that, although the minuteness of such organisms rendered their differentiation difficult, he did not despair that some day a specific form of vibrio in cholera would be found by experimental research. Therefore he would not abandon the notion of there being a cholera fungus, and of the cholera miasm being a ferment; and, looking to the present stage of inquiry respecting the comma bacillus, he holds that the question is still unsolved, even in spite of improved instruments and methods.

The idea that infective diseases are due to the presence of micro-organisms remained hypothetical until the discovery of the anthrax bacillus by POLLENDER, DAVAINE, and BRAUELL, that of the micrococci of variola and vaccinia by KEBER, and of the spirillum of relapsing fever by OBERMEIER came to supply definite facts as to the presence of microbes in the blood. Yet how much remains to be done, even in the first stage of this etiological research—viz., the proof of the presence of micro-organisms! Such proof is wanting in the case of a large number—and these the commonest forms—of infectious and contagious diseases. For the mere discovery of the presence of a microbe is of slight gain either to pathology or treatment. Is relapsing fever, asks VIRCHOW, better understood or treated since the discovery of the spirillum? Of what influence has the discovery of micrococci been upon the doctrines of small-pox and vaccination? Had it not been for PASTEUR'S application of the principle of attenuation of virus to the practice of protective inoculation, the sole practical outcome would have been that of LISTER, which, it must be remembered, was the result of a stroke of genius, and not of the demonstration of actual fact. Nevertheless, micro-organisms occupy the field. They occupy the thoughts and fill the dreams of many old and all young physicians. The part played by cells is forgotten, or deliberately ignored, and in evidence thereof VIRCHOW quotes a passage from a Paris journal in which it is declared that the republic of cells has been vanquished by the forces of parasitism. No wonder that the great founder of cellular pathology should cry—"Poor little cells! Many a man with his 'Abbé-Zeiss' seeks to render them invisible, and to bring into view only the stained microbe. Yet they are there, and can wait; their time will come again when physicians have finished the task of filling up the lacunæ of botanical knowledge. Then the cell will once more take up its position in the front rank of scientific and practical interest."

If, however, cell life should become again the foundation of morbid processes, it will be more or less under the influence of the new doctrines. For after a parasite has been discovered, and its mode of life ascertained, there remains the problem how it excites disease. When KOCH discovered the tubercle bacillus, many said that all the careful labour of former days upon phthisis had been thrown away. Phthisis was a unity, for the bacillus was at its root. Pulmonary tuberculosis was identical with caseous hepatisation, glandular tuberculosis with scrofula, and so on. But in a short time it was found that this unity could not be maintained, and pulmonary phthisis remains what it was—a process of varied origin, sometimes the outcome of mere inflammation, sometimes of specific tubercle. He who would understand it aright must learn something more than how to stain bacilli. So little light has the discovery thrown on phthisis that even the upholders of bacillary phthisis have to fall back upon the notions of predisposition and immunity. The knowledge of a bacillus may be necessary for a full comprehension of the origin of a morbid change, but it does not explain the lesion nor render its examination superfluous. So is it with leprosy. The discovery of the bacillus lepræ excluded a large number of other possible explanations, but made no positive advance in the diagnosis, prognosis, or cure of the disease, and will make no advance until by the application of the older knowledge of the local affections of leprosy to the bacillus we gain some insight into the relations between the two. That relation may be expressed in the terms of the title given by VIRCHOW to his paper.

We may conceive a state of war between the microscopic cell elements of the body and the microphytes. Both cell and microphyte are endowed each with its own life and powers. Which is the aggressor? What excites its attack? Does the other combatant resist, and, if so, by what means? Which of the two is vanquished in the struggle? These are questions to be answered. In olden time disease was regarded as a struggle. The definition of SCHULTZ-SCHULTZENSTEIN made it a struggle of life with death; but it is the living thing that struggles, and not life, whilst death is no active opponent—it is merely a negation. SCHÖNLEIN was nearer the truth in his statement that the living body contends against cosmic and telluric assaults. At present we know more of the properties and activities of cells than we do of these vegetable parasites, but knowledge of the latter and of their product—ptomaines—grows day by day, with clearer evidence that the nature of their action upon the cells of the body is a chemical one. The near future will have to determine what is the nature of the resistance offered to this agency by the living cell; and already the researches of METSCHNIKOFF have thrown some light upon this, showing how bacterial organisms can be taken up and destroyed by the cells of the animal body. Thus VIRCHOW predicts we shall see inquiry enter once more within the domain of cellular pathology. The search for the cause of diseased action will lead to the further question as to how that cause operates, and to answer this our knowledge of cell life will need to be expanded. If, then, the modern pathologist is engaged in detecting and describing bacterial organisms, he will so much advance our knowledge of disease; but he cannot in this limited view give that fulness to knowledge which will embrace not only the causative agent, but the organism acted upon; not merely the parasite, but the host; not the bacterium only, but the cell that it attacks. We need to be reminded of such things, if only to teach us a little humility, and to prevent us falling into errors which would do much to bar real progress in knowledge.

THE publicity which has recently been given to the subject of sexual sins may be excused by persons of very large charity, but it is in itself an enormous evil. The process of exposure has had all the evils of publicity and few of its advantages. There are things "done in secret" which "should not be so much as named" in family circles or in newspapers which have an entrance into private houses. Such, at least, was the philosophy of ST. PAUL who devoted himself as few have done before or since to the cultivation of "whatsoever things are *pure*." But we are in different hands now, and decent godly people and even eminent divines are found to excuse the wide dissemination of minute particulars of vice, and of those who pander to vice, amongst those who have no means of checking it, and who are likely themselves to be drawn helplessly into the fascinating vortex. All who would truly serve the cause of virtue and chastity we should recommend to regard with suspicion those who think to promote these virtues by publications of vice. We speak thus with the risk of being classed among those who are charged with "a conspiracy of silence." We do not heed the charge or those who make it. If any journal has been faithful to its duties in this matter, it is ourselves—not in times of agitation and sensation, but at all times. Virtue is too powerful an element of health, vice is too fruitful of sore and sad disease, to escape our consideration and attention. The profession which we represent is not unfaithful to its duties in this respect. It has opportunities which scarcely occur outside of itself to raise the question of personal purity and its enormous bearings on health and happiness; and it has no more holy duty than to use these opportunities wisely and gravely. We are no believers in quack solutions of this tremendous problem. By all means let public law do more than it has done, and all that it can do, for the protection of the young, not of one sex, but of both sexes. With all our boasted national purity, there are few capitals where more temptation and more indecency of literature are permitted in the streets than in this metropolis. Let the infinite meanness of strong men who use their strength or their wealth to demoralise those whom they ought to pity and protect be exposed and pitilessly punished. But the remedy of these great evils will not come from public law or from hideous and revolting details in newspapers of the coarseness and selfishness of individual scoundrels. The remedy will come only from the cultivation of purity in habit, in books, in newspapers, in schools, in the home. Some seem to think that the study of these questions from the point of view of the anatomist and the physiologist is the chief hope of a better state of things. This is very questionable; and the more the proposition is carried into detail the more doubtful will it appear. The most perfect knowledge of the anatomy and physiology of these matters will leave the individual in the same position as before. There is no question in which a knowledge of anatomy and physiology is so little likely to be helpful as in this. In regard to other functions they are decidedly advantageous. In regard to respiration, or digestion, or muscular efficiency, much help is to be got from an intelligent conception of the ends to be gained, and the organs and the means concerned in gaining them. But the questions recently agitated are not to be disposed of by imparting any amount of physiology and anatomy to young people. They are essentially moral and religious questions. They arise for each individual at an age when passion is strong and judgment and experience are weak. In other words, they arise in the human mind when it is in the greatest danger of being misled by the body. So great is this danger that many believe in no power to avert it in some form or another. But this is a faithless view, and one that is refuted daily in thousands of persons in whom the knowledge of anatomy and physiology is slight, but who, like MILTON, cherish "continually a pure mind in a pure body," and who, with him, argue that "if unchastity in a woman be such a scandal and dishonour, then certainly in a man, who is both the image and glory of GOD, it must, though commonly not so thought, be much more deflouring and dishonourable." It is to the religious subjection of the body that we must look for the spread of personal purity and sexual innocence. By all means let public law be on the side of the weak and those that need its help. Let our streets and literature be purged by a courageous Government of the filth that now disgraces them. But the great hope of the future—for rich and poor, for boys and girls—is in the efforts of parents and of all

teachers to promote purity and unselfishness of all sorts, and to encourage the young in the pursuit of these things, and of all sorts of knowledge, except that which is best deferred.

THERE is hardly a fact in the domain of disease more full of interest or more liable to arouse curiosity and speculation than that of the immunity so often conferred by an attack of an acute specific disorder from a future attack. We cannot pretend to have exhausted the whole of its true meaning when we assert that the special pabulum by which the specific germ develops is exhausted, no more than when, in the converse instance of recurrent diseases, we assert the presence of some individual tendency or predisposition. The majority of medical practitioners believe in the protective efficacy of vaccination, and admit as a partial explanation the results of PASTEUR'S experiments with "attenuated virus." But all explanations are mere guesses, and half glimpses of the truth. It is somewhat new, however, to find the fact of immunity transferred from the individual to the stock, although in the history of mankind there are many examples of the opposite sort, where whole races have been decimated by the invasion of an epidemic disease for the first time. If immunity can be inherited, the disposition to contract contagious disease should by mere process of time gradually dwindle; yet, so far as we can see, this does not happen, and where we do find evidence of a diminution in the amount or intensity of such diseases, we more rightly attribute it to the wider diffusion of sanitation. Professor KALTENBACH of Giessen, writing on this subject (VIRCHOW'S *Arch.*, Bd. 101, Hft. 1), says he has twice met with instances which seem to show that immunity can be transferred from parent to offspring. One was the case of a twin girl (one of a family of six children), who escaped contracting scarlet fever, although twice exposed to the contagion, when one or other of the children fell ill, including her twin sister, and this in spite of the child in question being thoroughly exposed to the risk of contagion. In all other respects the twins suffered alike; they simultaneously contracted catarrhs and twice measles. The difference as to susceptibility to scarlatinal poisoning may, it is suggested, be explained by the fact that the mother of the twins had the disease severely when six years of age, or fourteen years before the period of conception of these children; and whereas the one twin who enjoyed immunity resembled the mother in all her physical and mental qualities, the other as strikingly resembled the father. The transference of immunity to scarlet fever gained by the prior attack was not, the author thinks, more remarkable than the transference of the bodily and mental characters. The other case was one in which immunity from small-pox was apparently transmitted from the father. It occurred in HEBRA'S clinic in 1860. A woman attacked with small-pox gave birth to triplets. Two of the infants presented an eruption of vesicles over the whole body; the other remained healthy. Yet all three must have been exposed to the influence of the contaminated maternal blood. The inference was that the one who escaped had derived its immunity from the paternal side, but whether the father had been protected by a previous attack of variola or by vaccination was not known. We confess it to be difficult to accept the deductions of Professor KALTENBACH, but may agree with him that more attention should be paid to the possibilities of inherited immunity, as being explanatory of the many and great variations observed in the susceptibility of individuals to contagion—a susceptibility which may vary even at different periods of the individual's life. He suggests that the amount of protection and the duration of its power must vary as much as it does in cases where the immunity is acquired, and would explain thereby the occurrence of attacks of varying severity. He also touches upon the questions above referred to as to the change of type of diseases, through the influence of transmitted immunity operating through generations.

THE verdict in the case of HILLMAN *v.* CROSSKEY has almost necessarily gone for the defendant. How much excitement, and what particular sort of mental exaggeration of facts, are necessary to constitute "insanity" have not been determined, and perhaps never will or can be. It is, we think, to be regretted that certificates of lunacy are required for the safe custody and treatment of the insane. As Mr. Baron HUDDLESTON pointed out in his summing up on Wednesday, "at common law madmen, when violent, may be restrained." This is all that the conditions of *treatment* require. There is, in fact, no real need for any special enactment rendering examination before confinement for the purposes of treatment obligatory. As we have repeatedly contended, if the onus of keeping the insane from doing harm to themselves and others were thrown on those who undertake their care and cure, with the remedy of the lunatic at common law only, a good system of personal inspection would afford all the security desired. This would be far better from a public point of view than the system extant, which makes everything depend on the "person of unsound mind" having been thus classed by certification, after a single examination; the responsibility of the whole business being cast on the certifying practitioner whose certificate is *de facto* a warrant for arrest and a decree which condemns the person named therein to imprisonment, and arms his gaoler with full power to place him under lock and key, and to adopt pretty much what measures he pleases for his coercion. The position we take in this matter is that of the profession as a body, and therefore of the practitioners who are exposed to all this annoyance and ignominy by suits at law for damages based upon alleged negligence in the performance of an onerous and difficult task—a task more onerous and difficult than ought to be imposed on any professional man. In this case of HILLMAN *v.* CROSSKEY there was certainly no evidence for the plaintiff, and we are at a loss to understand how the case ever came into Court, or why, being there, the judge did not stop the proceedings before they went to the jury. Who is to reimburse Dr. CROSSKEY for the untaxable expense incurred in his defence, and to compensate him for the loss of precious time spent in protecting himself against an action, to say nothing of the worry and annoyance incident to the position in which he was placed?

DR. STIEDA of Dorpat, has been appointed Professor of Anatomy at the University of Königsburg in the place of Prof. Merkel; and Prof. Leube of Erlangen has accepted a "call" to Würzburg in succession to Prof. Gerhardt. Prof. Litzmann of Kiel, the well-known gynæcologist, has resigned his chair.

Annotations.

"Ne quid nimis."

THE INFLUENCE OF THE HOMERTON SMALL-POX HOSPITAL.

DR. TRIPE'S annual report affords a further proof of the serious evil which our metropolitan hospitals for small-pox have brought about. He deals with the period from October, 1883, to September, 1884, as including an epidemic year, and he asserts that the chief feature has been the recurrence of the disease in the streets and places within half a mile of the Homerton Hospital. During 1881-82 the attacks on 1750 houses included within a quarter of a mile radius of the hospital were at the rate of 126 per 1000; between a quarter and a half mile they were 95 per 1000 on 4026 houses, and outside this area the rate on 21,724 houses was only 31 per 1000. During the period 1883-84 the rate was 158 in the quarter-mile radius, 92 in the area between a quarter and half a mile, and only 22 outside. Here, therefore, we have reproduced the experiences of Fulham, and a single glance at the map which accompanies Dr. Tripe's report cannot fail to carry conviction as to the reality of the influence referred to. But Dr. Tripe goes further. He has now come to the conviction that the results which he describes are brought about through aerial infection. At one time he doubted this, but his examination of the small-pox occurrences in connexion with the prevailing meteorological conditions, a complete summary of which he gives, leads him now to express an opinion in favour of aerial diffusion; indeed, one peculiar outbreak he regards as conclusive in the matter. Dr. Tripe speaks in no hesitating manner as to the results which have been brought about by the metropolitan small-pox hospitals, every one of which he states has proved injurious to the public health of the neighbourhood in which it is placed. Notwithstanding his adverse comments, Dr. Tripe considers that the London small-pox hospitals can be so carried on as to confer benefit and to cause but little local injury. But this is subject to certain conditions. The wards must be small; the traffic of ambulances, visitors, tradespeople, and others must be as restricted as possible; the open space around the wards and recreation ground should be "as large as can be obtained"; and means should be taken to prevent small solid particles being blown from the wards into the open air. The condition as to the area of the site is somewhat vague, and we are inclined to doubt the efficacy of the plan of placing wire gauze over the window openings as advocated. If one thing above another has been clearly shown in this matter, it is that the air-borne emanations which produce mischief come from patients in the acute stage of the disease, and during this stage the infective particles conveyed by the air are so minute that any such contrivance cannot be expected to constitute a material hindrance to their passage. At the onset of his report Dr. Tripe refers to the permanent reduction which has now been made in the number of patients in the Asylums Board Hospitals, and he thinks it probable that the incidence of the disease will hereafter prove to be very different from what it has previously been in Homerton. We hope that this anticipation may be fulfilled, but we are by no means confident about it. Indeed the report itself touches on a question which gives some anxiety in this matter. It is admitted that small-pox persisted around Homerton "to a greater or less extent" when the disease "was non-epidemic," and this experience is, we fear, not confined to Homerton. Two meanings may be attached to the occurrence: either the diffusion which the hospital originally brought about was maintained after the removal of the prime cause, or else even a small number of patients sufficed to maintain a diminished prevalence around the hospital. If the first view be correct, the small-pox hospitals may be responsible for the fact that we are now never hardly free from small-pox in the metropolis; if the latter, we doubt very much whether the inhabitants in the localities concerned will be content to suffer, even to a diminished extent for the benefit of the public. The whole question calls for exhaustive inquiry.

IMPORTANT NOTICES BY THE MEDICAL COUNCIL.

WE direct attention to two important notices emanating from the Medical Council, and to be found in our advertising columns. The first of these has reference to the duty incumbent on registered medical practitioners of carefully and promptly intimating to the registrar of their respective divisions of the county any change in their address. We are frequently receiving complaints from practitioners of the inaccuracies of the Register, or of the hardship practised on them by the registrar in erasing their names from it under section 14 of the Medical Act. This much abused section requires the registrar to send a letter to any registered person, addressed to him according to his address on the Register, inquiring whether he has ceased to practise or has changed his residence. If no answer is returned in six months it is lawful to erase the name of such person from the Register. It is only fair in registered persons to remember that the registrar has to act under this clause, and that it is his only instrument for preserving the accuracy of the Register. It is not much to expect that any medical man changing his address should take the trouble to inform the registrar of the fact, or even that he should answer a letter of inquiry on the subject. At any rate, for this method the registrar is not responsible, but only the Act of Parliament; and scrupulous attention to the requirements of the clause would leave with the registrar the sole responsibility of inaccuracies. The consequences of inattention are serious—viz., the liability to erasure, and all the disabilities which attach to non-registration. For legal purposes a non-registered medical man is not a medical man. The second notice emanating from the Council has reference to the issue of the new edition of the British Pharmacopœia. Official notice will be given of the publication in the *London*, *Edinburgh*, and *Dublin Gazettes* on September 1st, 1885, after which copies of the work will be obtainable from either the Medical Council Office, 299, Oxford-street, or from Messrs. Spottiswoode and Co., 54, Gracechurch-street. The appearance of a new Pharmacopœia is more than ever an event in the medical world. The cynical contempt of drugs must be left to satirists; they are more than ever the good servants of intelligent physicians, and will repay careful respect and study. We trust very shortly to give our readers a careful estimate of the Pharmacopœia, both from a pharmaceutical and therapeutical point of view.

THE BRADSHAWE LECTURE.

THE circumstances under which it fell to the lot of Dr. Goodhart to deliver the Bradshawe lecture at the Royal College of Physicians on Tuesday last were tinged with melancholy; for he was doing that which his colleague, the late Dr. Mahomed, had been appointed to do. Those who heard, and the far larger number who will read, this lecture must feel that its delivery could not have been placed in better hands. It was a graceful act on the lecturer's part to select for his theme a subject which Mahomed had made his own, and still more full of grace and tenderness were the eloquent passages which referred to the zealous, earnest, and enthusiastic worker, whose early death last autumn was felt far beyond the circle of his personal friends. The subject—"morbid arterial tension"—was dealt with by Dr. Goodhart in a most suggestive manner. Naturally it had to

be dealt with critically, but the criticism was genial and thorough. By means of the wide experience he has gained in the post-mortem room of Guy's Hospital, the lecturer was well fortified with facts in the argument he employed concerning the cardio-vascular changes that are associated with Bright's disease. The controversies that have arisen around this subject have obscured its outlines, and we must all be grateful to Dr. Goodhart for sifting the question in such a manner as to bring into clearer relief the essential nature of the process. He proved that hardly any of the theories, taken alone, are tenable, but he showed also how readily the facts on which they are based can be harmonised. Nor would it be easy to gainsay the conclusion at which he has apparently arrived—viz., that the renal disease is, in truth, part of the deterioration suffered by the whole vascular area, or rather by all the tissues, from abnormal blood states. He does not take merely the change in the arterial walls as the index of this widespread retrogression; he discards the notion that the arterioles hypertrophy in opposition to the heart, but recognises a universal repulsion on the part of the tissues to be nourished (?) by impure blood, with the effect that the cardio-vascular system is subjected to undue strain, and the kidney suffers mostly out of proportion to other organs. It is a wide and philosophical view to take, and one, it seems to us, towards which Mahomed's new work was tending. The lecture teemed with happy and homely illustrations, and its language was pure and scholarly. It afforded also much material for careful thought; whilst in places—for instance, where the lecturer justified the occasional use of *a priori* reasoning, or pleaded for the retention of sentiment, or commended the spirit of far-seeing generalisation—it turned happily from the dry bones of scientific fact to the more inspiring, if less precise, region of speculation and idea.

AMPUTATION OF AN INVERTED UTERUS.

Dr. A. Grenander publishes in the Swedish medical journal *Hygeia* a case of polypus uteri with inversion, in which the organ was successfully amputated. The woman was fifty-eight years of age, had had six children, and had ceased to menstruate about seven years, when she began to suffer from hæmorrhage and after a time from an offensive discharge, for which she consulted the author, who, on examination, found the os patent and a large soft tumour occupying the uterus, which was about the size of a fœtal head at term. He advised the woman to go to a hospital, but she did not do so. Seven months later she was obliged repeatedly to send for a midwife to catheterise her. Suddenly, a few weeks afterwards, a tumour protruded from the vulva and bled profusely. The midwife diagnosed a polypus and endeavoured to remove it by traction. This proceeding produced so much pain that the patient begged her to desist and to send for Dr. Grenander, who, when he came, found that the tumour, which was the size of two fists, consisted of the inverted uterus and a large polypus attached loosely to it, so that he was able easily to separate them. He then attempted to replace the uterus, but, finding that impossible, ligatured the vagina, which was also partially inverted, and a week later, with the assistance of Dr. Söderström, excised the uterus with a Paquelin's knife at the level of the os internum. Antiseptic dressings were employed. There was but little pain, though no chloroform was administered. Some hæmorrhage occurred, and an additional ligature was required. No signs of peritoneal irritation followed, and in eight days the stump had returned to its normal position, being a finger's length from the vaginal orifice. For the first few days the precaution was taken of drawing off the water regularly in order to prevent the wounded surface or the dressings from contact with it. With the exception of some pain of a neuralgic character, which was rapidly controlled by morphia suppositories, no untoward symptoms occurred, and the patient made an excellent recovery. Examination of the amputated uterus showed that it could not have been replaced without damage to its structure.

SICKNESS-RATE AND DEATH-RATE.

A large number of our readers must be in possession of facts which would tend to throw great doubt on the death-rate of a locality as a sufficient basis upon which to estimate its sanitary condition. Many places known to be in a very insanitary state have a low death-rate, but it does not necessarily follow that the sickness-rate is correspondingly low; indeed, health officers have long since been mistrustful of the death-rate. They have known full well that simultaneously with a low death-rate there has been a high sickness-rate. While their figures have been quoted as among the lowest on record, the visiting lists of the local practitioners have been full; not, it may be, with cases jeopardising life, but, nevertheless, with such indisposition as necessitates medical attendance and renders the patient unfit for active occupation, and which is more commonly than not among preventable maladies. We would therefore take the proportion of medical practitioners to the population as affording a clue to the sickness-rate, or, better still, the number of patients on the medical practitioners' visiting lists, and the average duration and nature of each case of sickness, as a far more satisfactory indication of the sanitary condition of the locality than can be gathered from a death-rate drawn from a circumscribed radius with more or less of a shifting population. If, for example, sore-throat and febrile maladies prevail among the young and otherwise healthy, there will be a very high sickness-rate, with quite possibly and very frequently a low death-rate. In the instance of the outbreak of typhoid fever at the schools at Ashford there has been a very high sickness-rate, and an insanitary condition proved to demonstration, yet neither would be indicated by reference to the death-rate of the institution, or of the locality in which it is situated. We have known an instance of a village almost decimated by cholera where the death-rate previously and afterwards was so low that it was frequently quoted as one of the healthiest spots in the country. Thus sanitary authorities should be slow to vaunt the death-rate of their district as proof that their sewers are sufficient and their system of sanitation trustworthy.

OLD BURIAL-GROUNDS AS PLAYGROUNDS.

Setting aside what may be termed the sentimental objections urged against the use of disused burial-grounds as playgrounds, we think there is some reason to fear that unless proper precautions be taken harm may be done. We quite agree that there is greater peril attending the neglect of old burial-grounds than in their custody under the Metropolitan Board of Works, but we should like to see a more robust policy of dealing with these possible beds of dormant disease-germs. Why not, instead of simply covering them with asphalte or relaying the surface, saturate the earth with an agent destructive of the underlying corrupt material, and after the necessary interval plant the site with vegetation specially adapted to exhaust the soil. Something will sooner or later have to be done with the urban burial-grounds. The land cannot be permanently left undisturbed; and we believe that, whenever and however it is disturbed, there will be danger of the dissemination of disease unless measures are taken to render it innocuous. We now know that microbes are practically—if not specifically—the germs of disease, and these may be desiccated and lie inert indefinitely without becoming extinct. There are burial-grounds in London and most large cities

Annotations.

"Ne quid nimis."

THE INFLUENCE OF THE HOMERTON SMALL-POX HOSPITAL.

DR. TRIPE'S annual report affords a further proof of the serious evil which our metropolitan hospitals for small-pox have brought about. He deals with the period from October, 1883, to September, 1884, as including an epidemic year, and he asserts that the chief feature has been the recurrence of the disease in the streets and places within half a mile of the Homerton Hospital. During 1881-82 the attacks on 1750 houses included within a quarter of a mile radius of the hospital were at the rate of 126 per 1000; between a quarter and a half mile they were 95 per 1000 on 4026 houses, and outside this area the rate on 21,724 houses was only 31 per 1000. During the period 1883-84 the rate was 158 in the quarter-mile radius, 92 in the area between a quarter and half a mile, and only 22 outside. Here, therefore, we have reproduced the experiences of Fulham, and a single glance at the map which accompanies Dr. Tripe's report cannot fail to carry conviction as to the reality of the influence referred to. But Dr. Tripe goes further. He has now come to the conviction that the results which he describes are brought about through aerial infection. At one time he doubted this, but his examination of the small-pox occurrences in connexion with the prevailing meteorological conditions, a complete summary of which he gives, leads him now to express an opinion in favour of aerial diffusion; indeed, one peculiar outbreak he regards as conclusive in the matter. Dr. Tripe speaks in no hesitating manner as to the results which have been brought about by the metropolitan small-pox hospitals, every one of which he states has proved injurious to the public health of the neighbourhood in which it is placed. Notwithstanding his adverse comments, Dr. Tripe considers that the London small-pox hospitals can be so carried on as to confer benefit and to cause but little local injury. But this is subject to certain conditions. The wards must be small; the traffic of ambulances, visitors, tradespeople, and others must be as restricted as possible; the open space around the wards and recreation ground should be "as large as can be obtained"; and means should be taken to prevent small solid particles being blown from the wards into the open air. The condition as to the area of the site is somewhat vague, and we are inclined to doubt the efficacy of the plan of placing wire gauze over the window openings as advocated. If one thing above another has been clearly shown in this matter, it is that the air-borne emanations which produce mischief come from patients in the acute stage of the disease, and during this stage the infective particles conveyed by the air are so minute that any such contrivance cannot be expected to constitute a material hindrance to their passage. At the onset of his report Dr. Tripe refers to the permanent reduction which has now been made in the number of patients in the Asylums Board Hospitals, and he thinks it probable that the incidence of the disease will hereafter prove to be very different from what it has previously been in Homerton. We hope that this anticipation may be fulfilled, but we are by no means confident about it. Indeed the report itself touches on a question which gives some anxiety in this matter. It is admitted that small-pox persisted around Homerton "to a greater or less extent" when the disease "was non-epidemic," and this experience is, we fear, not confined to Homerton. Two meanings may be attached to the occurrence: either the diffusion which the hospital originally brought about was maintained after the removal of the prime cause, or else even a small number of patients sufficed to maintain a diminished prevalence around the hospital. If the first view be correct, the small-pox hospitals may be responsible for the fact that we are now never hardly free from small-pox in the metropolis; if the latter, we doubt very much whether the inhabitants in the localities concerned will be content to suffer, even to a diminished extent for the benefit of the public. The whole question calls for exhaustive inquiry.

IMPORTANT NOTICES BY THE MEDICAL COUNCIL.

WE direct attention to two important notices emanating from the Medical Council, and to be found in our advertising columns. The first of these has reference to the duty incumbent on registered medical practitioners of carefully and promptly intimating to the registrar of their respective divisions of the county any change in their address. We are frequently receiving complaints from practitioners of the inaccuracies of the Register, or of the hardship practised on them by the registrar in erasing their names from it under section 14 of the Medical Act. This much abused section requires the registrar to send a letter to any registered person, addressed to him according to his address on the Register, inquiring whether he has ceased to practise or has changed his residence. If no answer is returned in six months it is lawful to erase the name of such person from the Register. It is only fair in registered persons to remember that the registrar has to act under this clause, and that it is his only instrument for preserving the accuracy of the Register. It is not much to expect that any medical man changing his address should take the trouble to inform the registrar of the fact, or even that he should answer a letter of inquiry on the subject. At any rate, for this method the registrar is not responsible, but only the Act of Parliament; and scrupulous attention to the requirements of the clause would leave with the registrar the sole responsibility of inaccuracies. The consequences of inattention are serious—viz., the liability to erasure, and all the disabilities which attach to non-registration. For legal purposes a non-registered medical man is not a medical man. The second notice emanating from the Council has reference to the issue of the new edition of the British Pharmacopœia. Official notice will be given of the publication in the *London*, *Edinburgh*, and *Dublin Gazettes* on September 1st, 1885, after which copies of the work will be obtainable from either the Medical Council Office, 299, Oxford-street, or from Messrs. Spottiswoode and Co., 54, Gracechurch-street. The appearance of a new Pharmacopœia is more than ever an event in the medical world. The cynical contempt of drugs must be left to satirists; they are more than ever the good servants of intelligent physicians, and will repay careful respect and study. We trust very shortly to give our readers a careful estimate of the Pharmacopœia, both from a pharmaceutical and therapeutical point of view.

THE BRADSHAWE LECTURE.

THE circumstances under which it fell to the lot of Dr. Goodhart to deliver the Bradshawe lecture at the Royal College of Physicians on Tuesday last were tinged with melancholy; for he was doing that which his colleague, the late Dr. Mahomed, had been appointed to do. Those who heard, and the far larger number who will read, this lecture must feel that its delivery could not have been placed in better hands. It was a graceful act on the lecturer's part to select for his theme a subject which Mahomed had made his own, and still more full of grace and tenderness were the eloquent passages which referred to the zealous, earnest, and enthusiastic worker, whose early death last autumn was felt far beyond the circle of his personal friends. The subject—"morbid arterial tension"—was dealt with by Dr. Goodhart in a most suggestive manner. Naturally it had to

be dealt with critically, but the criticism was genial and thorough. By means of the wide experience he has gained in the post-mortem room of Guy's Hospital, the lecturer was well fortified with facts in the argument he employed concerning the cardio-vascular changes that are associated with Bright's disease. The controversies that have arisen around this subject have obscured its outlines, and we must all be grateful to Dr. Goodhart for sifting the question in such a manner as to bring into clearer relief the essential nature of the process. He proved that hardly any of the theories, taken alone, are tenable, but he showed also how readily the facts on which they are based can be harmonised. Nor would it be easy to gainsay the conclusion at which he has apparently arrived—viz., that the renal disease is, in truth, part of the deterioration suffered by the whole vascular area, or rather by all the tissues, from abnormal blood states. He does not take merely the change in the arterial walls as the index of this widespread retrogression; he discards the notion that the arterioles hypertrophy in opposition to the heart, but recognises a universal repulsion on the part of the tissues to be nourished (?) by impure blood, with the effect that the cardio-vascular system is subjected to undue strain, and the kidney suffers mostly out of proportion to other organs. It is a wide and philosophical view to take, and one, it seems to us, towards which Mahomed's new work was tending. The lecture teemed with happy and homely illustrations, and its language was pure and scholarly. It afforded also much material for careful thought; whilst in places—for instance, where the lecturer justified the occasional use of *a priori* reasoning, or pleaded for the retention of sentiment, or commended the spirit of far-seeing generalisation—it turned happily from the dry bones of scientific fact to the more inspiring, if less precise, region of speculation and idea.

AMPUTATION OF AN INVERTED UTERUS.

Dr. A. Grenander publishes in the Swedish medical journal *Hygeia* a case of polypus uteri with inversion, in which the organ was successfully amputated. The woman was fifty-eight years of age, had had six children, and had ceased to menstruate about seven years, when she began to suffer from hæmorrhage and after a time from an offensive discharge, for which she consulted the author, who, on examination, found the os patent and a large soft tumour occupying the uterus, which was about the size of a fœtal head at term. He advised the woman to go to a hospital, but she did not do so. Seven months later she was obliged repeatedly to send for a midwife to catheterise her. Suddenly, a few weeks afterwards, a tumour protruded from the vulva and bled profusely. The midwife diagnosed a polypus and endeavoured to remove it by traction. This proceeding produced so much pain that the patient begged her to desist and to send for Dr. Grenander, who, when he came, found that the tumour, which was the size of two fists, consisted of the inverted uterus and a large polypus attached loosely to it, so that he was able easily to separate them. He then attempted to replace the uterus, but, finding that impossible, ligatured the vagina, which was also partially inverted, and a week later, with the assistance of Dr. Söderström, excised the uterus with a Paquelin's knife at the level of the os internum. Antiseptic dressings were employed. There was but little pain, though no chloroform was administered. Some hæmorrhage occurred, and an additional ligature was required. No signs of peritoneal irritation followed, and in eight days the stump had returned to its normal position, being a finger's length from the vaginal orifice. For the first few days the precaution was taken of drawing off the water regularly in order to prevent the wounded surface or the dressings from contact with it. With the exception of some pain of a neuralgic character, which was rapidly controlled by morphia suppositories, no untoward symptoms occurred, and the patient made an excellent recovery. Examination of the amputated uterus showed that it could not have been replaced without damage to its structure.

SICKNESS-RATE AND DEATH-RATE.

A large number of our readers must be in possession of facts which would tend to throw great doubt on the death-rate of a locality as a sufficient basis upon which to estimate its sanitary condition. Many places known to be in a very insanitary state have a low death-rate, but it does not necessarily follow that the sickness-rate is correspondingly low; indeed, health officers have long since been mistrustful of the death-rate. They have known full well that simultaneously with a low death-rate there has been a high sickness-rate. While their figures have been quoted as among the lowest on record, the visiting lists of the local practitioners have been full; not, it may be, with cases jeopardising life, but, nevertheless, with such indisposition as necessitates medical attendance and renders the patient unfit for active occupation, and which is more commonly than not among preventable maladies. We would therefore take the proportion of medical practitioners to the population as affording a clue to the sickness-rate, or, better still, the number of patients on the medical practitioners' visiting lists, and the average duration and nature of each case of sickness, as a far more satisfactory indication of the sanitary condition of the locality than can be gathered from a death-rate drawn from a circumscribed radius with more or less of a shifting population. If, for example, sore-throat and febrile maladies prevail among the young and otherwise healthy, there will be a very high sickness-rate, with quite possibly and very frequently a low death-rate. In the instance of the outbreak of typhoid fever at the schools at Ashford there has been a very high sickness-rate, and an insanitary condition proved to demonstration, yet neither would be indicated by reference to the death-rate of the institution, or of the locality in which it is situated. We have known an instance of a village almost decimated by cholera where the death-rate previously and afterwards was so low that it was frequently quoted as one of the healthiest spots in the country. Thus sanitary authorities should be slow to vaunt the death-rate of their district as proof that their sewers are sufficient and their system of sanitation trustworthy.

OLD BURIAL-GROUNDS AS PLAYGROUNDS.

Setting aside what may be termed the sentimental objections urged against the use of disused burial-grounds as playgrounds, we think there is some reason to fear that unless proper precautions be taken harm may be done. We quite agree that there is greater peril attending the neglect of old burial-grounds than in their custody under the Metropolitan Board of Works, but we should like to see a more robust policy of dealing with these possible beds of dormant disease-germs. Why not, instead of simply covering them with asphalte or relaying the surface, saturate the earth with an agent destructive of the underlying corrupt material, and after the necessary interval plant the site with vegetation specially adapted to exhaust the soil. Something will sooner or later have to be done with the urban burial-grounds. The land cannot be permanently left undisturbed; and we believe that, whenever and however it is disturbed, there will be danger of the dissemination of disease unless measures are taken to render it innocuous. We now know that microbes are practically—if not specifically—the germs of disease, and these may be desiccated and lie inert indefinitely without becoming extinct. There are burial-grounds in London and most large cities

where large numbers of poor have been buried who died of plague, cholera, fever, or of a host of other formidable maladies. It cannot be questioned that if at any time the remains of these somatically, but not molecularly, dead people are exposed, there *may* be a revival of the dormant germs. Nothing short of *destruction*, either by fire or some absolutely disintegrating agent, will probably suffice to render the morbific elements of deceased animal bodies harmless.

PROLONGED CATALEPSY IN A SOLDIER.

CASES of prolonged catalepsy, though much more rare in males than in females, are not absolutely unknown. *La Enciclopedia Habana* publishes the case of a Spanish soldier aged twenty-two, at the present time in the military hospital of San Ambrosio in Cuba, who has been in a cataleptic state for fourteen months. He is emaciated, though perhaps less so than might have been expected. The decubitus is described as indifferent, his body remaining in any position in which it is placed, the eyelids quiver constantly, and the facial muscles contract so as to give somewhat the appearance of dementia. He is apparently insensible to pain, but the pupils contract under the influence of light, and the eyeballs rotate so as to avoid light. The respiration, pulse, and cardiac sounds are almost imperceptible; the temperature remains stationary at 36·4° C. His nourishment, which at the beginning of the cataleptic condition had to be limited to about a kilogramme of milk in the day, has been increased gradually to three kilogrammes, and to this some soup or extract of meat and thirty grammes of quinine wine have been added. Defecation and micturition take place regularly. Occasionally he has sneezed or coughed, and is reported by the occupants of neighbouring beds to have uttered words during the night. The treatment has included strychnine, bromide of potassium, tonics, subcutaneous injections of ether, and faradisation; but little effect seems to have been produced by anything that has been tried. There is, however, now slightly more movement than there was several months ago, and since he has tolerated more nourishment his weight has increased more than 10 lb. As usual in these cases, no distinct cause can be assigned for the disease. It is noted that for some months before it declared itself the man had suffered from extreme depression with anæmia, which was attributed to nostalgia; he then began to have attacks of temporary or intermittent catalepsy, which culminated in the condition above described.

COLD PEDAL DOUCHE FOR CATARRH.

MEDICAL science often seems to be a compound of contradictions. The hot foot-bath with or without mustard is a popular remedy for colds, whether of the head or chest. The use of the cold douche to the lower extremities for catarrhal maladies is not so well known, and by no means so frequently advocated. Recently, however, M. Bourgarel has extolled the benefit of the cold douche to the feet in diseases of the respiratory passages. As all the world knows, the object of the pedal excitant is the production of *reaction*. M. Bourgarel maintains that reaction is easily obtained by the application of cold, and for this purpose the douche need not be very forcible or long applied. It is recommended that the cold douche to the feet be systematically used. There can scarcely be a doubt of the value of this treatment provided the cases in which it is prescribed are suitable. As a general tonic to the circulatory and nervous systems, the application of cold water under some pressure to even a small area of the superficies of the body stands in a high place. The beneficial effect on the system at large reflects itself on those parts which are in a less healthy or atonic state. And so it follows that the remedy in question may put the finishing stroke to a chronic catarrh. That the temporary shock and subsequent reaction implied in the cold douche may also prove of service in spasmodic attacks is not without the bounds of physiological reason.

THE SANITARY STATE OF SWANSEA.

DR. BALLARD has, as the South Wales press puts it, been giving the Swansea Town Council some "plain speaking" about the sanitary state of their borough in view of cholera prospects. He reminded them how severely Swansea was affected in 1866, and then went on to explain that now, in 1885, he found some parts of the town in "a horrid state" for lack of proper means of sewerage, that some of the privies were in a very bad state, that the flooring of cottages was at times so bad that cleanliness was impossible, and finally he entered into some details as to their water-service. An outbreak of enteric fever had occurred, which was due to pollution of the Blaenant Dhu reservoir; and yet this has not sufficed, for, as Dr. Ballard put it, the state of the surroundings of the Lliw reservoir was such as utterly to shock him, the water-supply being derived from land having farms on it, the sewage from which necessarily runs into the reservoir. Enteric fever excreta have also succeeded in getting into the water, with the result that there have been some 400 cases of fever, and had the source not been detected by Mr. Ebenezer Davis, the medical officer of health, the number would, according to Dr. Ballard, possibly have reached 4000. Dr. Ballard concluded by explaining that the Council had been informed of this state of the gathering-ground by their own officer of health, and while giving them credit for the various sanitary works they had carried out, he told them, in language which it is to be hoped they will remember, that it was incumbent on them both morally and legally, and especially at such a juncture, to do all in their power to protect the inhabitants of the borough against such dangers as they had in their midst.

POPULAR RECREATION GROUNDS.

To speak of making special provision for recreation in cases where the interests of money are opposed will seem to some the height of absurdity. Others, more sensible of the real meaning of prosperity, will maintain that a rule of life should allot our time in just proportions to doing and resting, to getting, laying up, and giving, and even to timely amusement. We are of the latter opinion. Not even the swift activity of the nineteenth century can make us forgetful of the fact that work of brain or muscle, if it is to be anything more than a transient explosion, must have the health at least, but better still the vigour, of the whole body to rely upon. Though we should allow that for some lives no such favourable conditions are absolutely necessary, since mechanical help has minimised their actual labour, we should still find that, apart from a healthy frame, initiative and intelligent application, the best proofs of healthy vitality, were but phantoms of departed powers. Let us therefore be thankful that the public mind of this country does not yet despise recreation. On the contrary, the desire for it is apparent in the sports of every rural district. The increasing popularity of all such exercises is a sign that they meet a want. The favour with which they are received in towns, and the rise of new varieties which may be regarded as indigenous there, are matters for general approval. It is, nevertheless, in the very nature of towns and cities that they should by their growth endanger the freedom of space, without which exercise is only a cramped manœuvre. The Commons Preservation Society is a standing evidence of this injurious tendency. The records of its acts afford additional proof that the encroachments on public land which it has often and successfully sought to control are not due

to any unavoidable expansion, but rather to the inconsiderate enterprise of companies and of private capitalists. It cannot be said that the evils at which the Society strikes are novel. For centuries the same process of absorption has been going on. In the older statutes, however, we find, as has been pointed out by Mr. James Johnston in a recent paper, that the prevailing tone in regulating such enclosures of land is one of consideration for the public interest. In every one such the common rights of tenants are carefully guarded. Even in the more recent enactments this principle has not been lost sight of. In that of 1845 the duty of leaving vacant for recreation certain spaces of such public lands as may be enclosed is particularly enforced. This latter injunction might be more fully stated. Embodying at once the sense of the older laws and of modern science, it may serve as a keynote for future discussion on this subject, which, as it owes its need of amendment to Parliamentary influence, may be expected to find a remedy in legislation.

THE HOURS OF LABOUR BY ATTENDANTS AT RESTAURANTS.

A CORRESPONDENT, writing to the *St. James's Gazette*, calls attention to the excessive hours of labour which are imposed upon the young women in the employment of a London caterer who owns more than one large establishment. He encloses a copy of the rules, which are hung up in a conspicuous place for the guidance of the *employées*, from which document it seems that the "early hands" have to appear in the bar at 4·55 A.M., and are supposed to leave the bar at 10 P.M., but it is, the correspondent states, generally fifteen or twenty minutes later. The "other hands, who come on at 8 A.M., generally leave about 1 A.M. or even later, having to clean up the bar after the house is closed." On Saturdays the "early hand" does not leave the bar at 10 P.M., but continues until the house is closed and the place cleared up, by which time it will be about half-an-hour after midnight. The early turn is taken by all hands in rotation. For breakfast, dinner, and supper twenty minutes are allowed for each meal, for tea thirty minutes, and the time of rest is two hours per day. From the above it appears that, after making all deductions for meals, &c., the "early hand" works fourteen hours on Saturdays and about twelve hours and a half on other weekdays—a length of labour which certainly is excessive for a young woman.

VACCINATION AFTER EXPOSURE.

ACCORDING to the last quarterly report of the proceedings of the Illinois State Board of Health, 144 persons suffered from small-pox, the disease having been contracted at a negro "protracted meeting," and of this number 120 had never been vaccinated. Within from three days to "about a week" 14 of these 120 persons were vaccinated. Amongst the remaining 106 cases 38 died, being a mortality at the rate of 35·84 per cent. Of the 14 vaccinated after exposure all recovered; and amongst the 37 who had been vaccinated prior to exposure, one single person, vaccinated once twenty-five years before, died. The late Mr. Marson attached no value to vaccination if performed after an interval of four complete days from the exposure, his statement being as follows: "Suppose an unvaccinated person to inhale the germ of variola on a Monday; if he be vaccinated as late as the following Wednesday the vaccination will be in time to prevent small-pox being developed; if it be put off until Thursday the small-pox will appear, but it will be modified; if the vaccination be delayed until Friday it will be of no use—it will not have had time to reach the stage of areola, the index of safety, before the illness of small-pox begins." But the Illinois report gives prominence to the belief that vaccination has a positive therapeutic value as well as the prophylactic power to which Mr. Marson referred, and in the fifth annual report of the Board of Health it is alleged that "if a patient be vaccinated during the febrile stage and the vaccination progress normally . . . the areolar stage of vaccination will be reached before the dangerous tenth day of the variolous disease, and, as has been repeatedly witnessed, the graver disease will be aborted, jugulated, or materially modified." Hence it is inferred that it is never too late to vaccinate; we prefer, however, the alternate maxim laid down, which is that in cases where there has been possible exposure "it is never too soon to vaccinate."

THE EFFECTS OF LIGHTNING-STROKE.

AT a recent meeting of the Berlin "Verein für Innere Medicin," Dr. Liman described the changes present in the bodies of two men who had been killed by lightning when taking shelter under the trees of the Thiergarten. In the one subject, the hair over the left temple was singed, and the skin from the left ear to the shoulder-blade was discoloured a brownish-red, the chest and abdomen being covered with red and white streaks. Reference was made to the dendritic figures described in many cases, and attributed often to impressions of twigs, leaves, &c. (a specimen of which was figured in our columns not very long ago), and in this body there was a figure which could be compared to a palm-leaf, but which was undoubtedly due to the contact of the folds of the shirt. The parts thus pressed upon remained white, the surrounding skin being reddened. The apex of the heart was the seat of an irregular cavity, which communicated with both ventricles; evidently the lightning-stroke had caused rupture of the organ. In the other case, the skin and hair were similarly excoriated and singed, and numerous ecchymoses occurred beneath the serous layers of the pericardium and pleura; the lungs were much congested. Here death was evidently due to asphyxia. Dr. Liman mentioned, and Professor Leyden confirmed, the fact that death by lightning is occasionally accompanied by rupture of internal organs, as the brain and liver.

CONVALESCENT HOMES FOR THE POOR.

THE convalescent home in some form or other has come to be a recognised part and almost a standing rule of medical treatment. Its purpose, to confirm recovery, is in many cases as much founded on necessity as is the period of rest which is allowed a newly-healed fracture. To put a strain of work upon the rallying constitution or the point of bony union would be equally ill-judged, and the danger of relapse in either instance is proportional to the weakness, poverty, and innutrition of the subject. These are reasons why the convalescence of the sick poor ought to be as carefully considered as their treatment during the action of disease. The weakened adult or child who is at once dismissed from the sick bed without further provision for his cure goes first, in all likelihood, to a home where means and food are scanty, and to which he only adds one hungry but still unprofitable mouth. Obviously the pressure of his maintenance falls where it cannot be met. The intermediate stage of rest has to be ignored, and, if old enough, to work he must go. Efforts to make good the needed interval have not been wanting during the past few years. A good deal has been done, but not enough. Many, especially of the poorest of the urban population, escape the notice of those who make the work of convalescent aid their care. The establishment of homes is certainly a part of this work which advances steadily and even swiftly. The generous donations of Sir Sydney Waterlow and Sir Isaac Lowthian Bell may be cited as recent examples of its extension. Various seaside or inland homes, maintained partly by public

subscription and partly by a low weekly payment by patients, might be quoted in illustration of a method by which others of less wealth may show, and have shown, a like humanity. Another part of the same work, however, seems to us to require development as much, or perhaps more. This is the finding and selecting of suitable cases of illness among the poor in hospital, or outside of it, in order to render them the necessary assistance. As matters stand, a good many are thus assisted, but a far greater number probably are allowed to recover as they can. If visitors in poor districts and at hospitals will pay attention to this subject, they will do a grateful service to many of their kind.

CHOLERA PRECAUTIONS IN THE UNITED STATES.

ACCORDING to the Illinois State Board of Health, the action of the delegates who were sent from England to the International Sanitary Conference at Rome was based upon experience mainly limited to India, which led them to deny the infectiousness of the dejecta and to pronounce disinfection unscientific. This is certainly not correct as regards one of the British delegates, who assisted with the delegate of the United States in preparing the code of regulations as to disinfection which the Conference adopted. The New World, believing in the possibility of importation and in the infectious character of this disease, intends to rely for the exclusion of cholera and other Old World pestilences upon such precautionary measures as can be secured at ports of arrival. This is, indeed, the practice adopted in England, the precautionary measures being so organised that they shall not fail because they are impracticable, and being supplemented by efforts to secure efficient sanitary administration inland as well as along the coast line.

THE ABERDEEN INFIRMARY.

THE administration of the Aberdeen Infirmary seems to be in anything but a satisfactory state, if we may judge from a speech lately made and letters written by Dr. Angus Fraser, one of the physicians of the hospital. According to his representations the most glaring sanitary defects exist, and have existed, in spite of his remonstrance, for twelve months. One patient with secondary hæmorrhage appears to have received scant attention, with a fatal result. On a recent Sunday Dr. Fraser visited the wards between ten and eleven in the morning. He went through nine wards, and in only one was a nurse present. The Committee of Management allege that they are anxiously investigating the matter complained of. But considering that some of them have had a duration of a year, the investigation seems more prolonged than effective.

THE WEATHER AND THE PUBLIC HEALTH.

SINCE the 28th of July last the mean temperature has been for the most part below the average, and the last weekly return of the Registrar-General shows a corresponding improvement in the public health, judged by the mortality returns for nearly nine millions of the English population living in the twenty-eight large towns. The annual death-rate in these towns, which had fallen to 17·6 in the middle of June, rose with the increasing temperature, during seven consecutive weeks, to 21·8 in the first week of August. Last week, under the influence of the decline of temperature which set in at the end of July, the death-rate fell again to 20·5. Apart from diarrhœa mortality, the general death-rate from the principal zymotic diseases is just now remarkably low, especially that from scarlet fever, and "fever," principally enteric; and the fatal cases of measles, which were excessive throughout the spring and early summer, have since steadily declined. On the whole, in spite of the spell of high temperature in July, which caused a great increase of diarrhœa fatality among infants, the recent death-rate has been considerably below the average for the season, and betokens the eminently satisfactory health condition of the large towns, and inferentially of the whole country. The deaths in the second week of August in the twenty-eight large towns were fewer by 218 than those in the previous week; the deaths of infants under one year showed a decline of 164, and the deaths attributed to diarrhœa of 79. The annual death-rate from diarrhœa in the twenty-eight towns declined from 3·7 in the first week of August to 3·2 in the second, the decline being especially marked in Leicester and London; the rate from this course, however, was last week equal to 7·4 in Salford and 10·4 in Preston. The varying periodicity of the outbreaks of diarrhœa in the various towns has never been satisfactorily explained.

THE DIARRHŒA EPIDEMIC IN HULL.

A PAMPHLET recently issued by Dr. Kelburne King reproduces a paper which he has prepared on the serious outbreak of diarrhœa with which Hull was visited in March and April last. The outbreak commenced on March 21st, and the cases ran up from 36 to over 100 a day until the 27th, from which date until April 4th the fresh number of daily attacks varied from 69 to 116; a gradual diminution then took place, and by April 12th the epidemic, as such, may be said to have ceased. It is estimated that during the course of the prevalence not less than 20,000 people suffered; the mortality, which mainly affected old people, was, however, small. Dr. King then explains in detail how, owing to a scarcity in the town water service, two new adits were made; and he then centres attention on one of these, into which, at intervals between Jan. 15th and March 20th, two other water-supplies, alone or mixed, were admitted. Both these latter are described; and chemical analysis of one of them, known as the Sandbeck water, shows how utterly unfit such water was for distribution to the public. Dr. King is, however, unable to explain why the water should, at the particular date when the epidemic commenced, have acquired injurious properties, whereas it failed to produce notable mischief from Jan. 15th onward; and he is under the impression that, improper as the admixture was, the actual cause of the diarrhœa only had access to the water-supply just before March 22nd. He has no doubt whatever but that it was the town water that caused the outbreak; and the suddenness of the epidemic, together with other characteristics, bears out this view. It is possible that when the medical officer of health issues his report on this remarkable epidemic, some of the points which are still obscure may be cleared up.

SALIVARY SEPTICÆMIA OF RABBITS.

FOUR years ago Raynaud and Lannelongue injected the saliva of a rabid infant into rabbits. There resulted a disease which was at first regarded both by them and Pasteur (who repeated the experiment) as rabies. But Pasteur discovered the mistake, and detected in the blood of the rabbits a microbe having a figure-of-8 appearance. In the course of time Vulpian showed that the normal saliva of a fasting man produced the same effects in rabbits that some had ascribed to a special microbe, and others (Griffini, for instance) to a simple poisoning. MM. Bordone-Uffreduzzi and E. di Mattei have again investigated the matter in M. Bizzozero's laboratory. They have detected in normal human saliva a special micro-organism, an oval bacterium, similar to that which exists in the blood in the septicæmia of rabbits. It is also stated that this bacterium can be cultivated through successive generations in artificial media, and that the product of such cultures

when injected under the skin or into the veins has the property of reproducing the morbid phenomena of the disease in question. This microbe grows in gelatine and serum of blood at 16° to 20° C., especially at the surface, and therefore belongs rather to the aerobic class of germs. It assumes the form of round colonies of a greyish-white colour, which do not liquefy the gelatine until their development is far advanced.

THE WILLESDEN INFECTIOUS HOSPITAL HUTS.

AT the present moment, when sanitary authorities are being pressed to make arrangements for isolating cases of cholera should that disease make its appearance in our midst, the Willesden portable hospitals, consisting of a framework covered with the well-known Willesden paper and canvas, deserve notice, as offering very substantial advantages in connexion with the provision of temporary buildings for isolation purposes. They can be erected with great rapidity, and they are, compared with certain other means of isolation, by no means costly. They can be well ventilated, and may be regarded as adapted to by far the greater number of months in the year in our climate. It is, indeed, contended that they answer in the winter, but we are not aware of any experiments showing how an adequate temperature can be maintained in severe weather whilst the needed ventilation is maintained. But under any circumstances, they will be eminently useful in face of the possible emergency which now presents itself. With regard to all temporary hospital provision, we cannot omit to point out that those authorities and other bodies who intend to resort to them must remember that a site has to be in readiness, that drainage and water-supply and other requisites are needed, and that these cannot be provided on the spur of the moment, although the hospital itself may be ready for erection.

WESTERN AUSTRALIA VOLUNTEER CORPS.

WE have received from Western Australia copies of a correspondence relative to the appointment of a medical officer to the Volunteer force in that colony, apparently in disregard of the regulations of the service with respect to qualification. It is stated that a gentleman whose qualifications consisted of the membership of the Royal College of Physicians of Edinburgh and the licence of the Society of Apothecaries of London, but who held no surgical diploma, was appointed surgeon-major of the volunteer corps. Against this appointment a protest was entered, on the ground that he was not eligible in accordance with the regulations for such appointments. This protest has been disregarded by the local authorities, and the question has been sent home for decision by the Secretary of State for the Colonies. In this country it is indispensable that medical officers should possess "two diplomas or licences—one to practise medicine and the other surgery—and be registered under the Medical Act." It would be a great mistake to sanction the appointment of medical officers in the colonies with inferior qualifications, and it would appear specially ill-advised to appoint to a military corps a medical officer who holds no surgical qualification. In England there is no such appointment as surgeon-major to a Volunteer corps, the highest grade being surgeon. If the authorities in Western Australia have thought fit to make the higher appointment, we see no objection to it, but such a step should involve a rigid adherence to the qualifications deemed necessary in an officer holding such a position. To appoint a gentleman who possesses inadequate qualifications to a post which involves a certain amount of supervision must have the effect of preventing a good and well-qualified class of men from entering the Volunteer force. We trust the whole question may receive careful investigation at the Colonial Office, and regulations be framed which will prevent the adoption of so unsatisfactory, and apparently unjustifiable, a course as that which has been followed in the present instance.

THE HEALTH OF FINCHLEY.

THE medical officer of health of the Finchley Urban Sanitary District has contradicted the statement which has been extensively circulated with regard to the extreme prevalence of whooping-cough in his district. In his ordinary fortnightly report to the Local Board he stated (more by way of apology for not giving, as he usually does, the exact number of cases of each infectious disease of which he had been informed in the several sub-districts, than by way of emphasising the prevalence of the disease) that two of the medical men whom he had asked as to the number of cases they were attending had told him that they could not give the number even approximately. It is now explained that they did not mean that the number was too great for them to count, but that they could not do so without an examination of their books, and that to busy medical practitioners would mean loss of time having a pecuniary value, for which, in this district as in most others, they would not be repaid. As a matter of fact, the health of the district is very satisfactory, the death-rate during the fortnight to which the report in question referred having been at the yearly rate of 9·6 per 1000.

LIGATURE OF THE BILE DUCT.

THE effects of ligature of the bile duct have been so often investigated that the subject would seem not to offer much room for further exploration. Nevertheless, Dr. Canalis has, at the instigation of Bizzozero, reopened the investigation. The principal facts that have been noted in the liver of guinea-pigs after ligature of the bile duct are destruction of the hepatic tissue during the first hours after ligature, a proliferation of the epithelium of the biliary channels, and a new formation of connective tissue and of biliary canaliculi in the destroyed portions of the liver. Dr. Canalis has further observed a great number of karyokinetic[1] figures in the epithelium of the biliary canaliculi, and also fusiform and round cells in the newly-formed connective tissue. He has also noted the transformation of a large number of hepatic cells on the fourth day after ligature, which is the more surprising, as some observers believe that the hepatic cells themselves are purely passive during the process.

"THE RUSSIAN MILITARY MEDICAL SERVICE."

A SAD picture is drawn by "Stepniak," writing in *The Times* of the 18th inst., of the moral condition of the medical department of the Russian army. It is well known that bribery and peculation are almost universal amongst Russian officials; but according to "Stepniak" the posts occupied by medical officers are so largely administrative that they offer peculiar facilities for making money by collusion with contractors. Thus the charge of a hospital is considered a specially valuable appointment, and large bribes are demanded by the high administrative officer for nominations of this kind. In some cases even an annual tribute is enforced, the amount of which depends upon the extent to which so-called "savings" and "economies" can be practised. It is well understood by the Russian people that in case of another war the soldiers would have bad bread and bad provisions generally; they would have to march barefoot, as contractors would arrange to deliver

[1] Karyokinesis is the term used to signify the collective changes in the division of a nucleus.

boots after a battle instead of before; and when sick or wounded they would be without coverings, and they would receive cream of tartar instead of quinine, the "savings" thus effected going into the pockets of medical and other officers.

TREATMENT OF CYSTITIS.

THE prevention of decomposition is the most important matter in the treatment of cystitis. Decomposition of the urine increases the vesical inflammation by augmenting the irritation, and the more muco-pus is secreted the more favourable are the conditions for septic organisms. It is the vicious circle once more. The proposal of Rossbach to use naphthaline should receive careful and practical attention. According to him, one or two grains of this substance had a remarkable effect on a severe case of vesical catarrh, so that the decomposition of the urine was arrested in from two to three days. In less severe cases one or two days suffice to effect a complete cure. Even in tubercular disease of the urinary passages, complicated by disease of the lungs, the daily administration of five grains of naphthaline produced a notable diminution in the number of bacteria, as well as in the amount of deposit, and the sufferings of the patient were lessened.

THE LATE MR. JOHN NETTEN RADCLIFFE.

WE are exceedingly glad to announce that the Queen has been graciously pleased to allow a pension of £100 a year out of the Civil List to the widow and children of the late Mr. Radcliffe, who was one of the best of men, and whose work in the Department of Public Health, and especially with reference to the great routes of cholera, the mode of its propagation, and the best means of its arrest, was of national and of international importance. This act of Her Majesty and her advisers will meet with the general approval of the profession.

THERE has just been established under the auspices of Lady Dufferin, as lady president, a National Association for supplying Female Medical Aid to Women in India. The Viceroy is patron, the Presidency Governors and Lieutenant-Governors are vice-patrons, and their wives vice-patronesses. The object is to supply in hospital wards and within private houses that medical care and advice which respectable native women will only accept from their own sex. The Association will provide scholarships for women under tuition, and will procure from Europe and America a sufficient number of skilled female medical teachers. The executive body consists of a small central committee working under the presidency of Lady Dufferin, and it is hoped that corresponding branches will be formed in each province. The support and sympathy of influential native princes have already been promised, and aid from England and India is invited.

ON the 6th inst., at a public meeting at Hackney to consider the question of the pollution of the river Lea, and to devise means for getting rid of this disgraceful nuisance, a committee was chosen, by whom it has been decided to request the Conservancy to order the locks to be opened daily, so as to flush the river and remove the foul and stagnant water, and generally to exercise all their powers for keeping the river below Tottenham in a pure and wholesome state.

THE *London Gazette* of the 14th inst. announces that the Queen has conferred the Albert Medal of the Second Class upon Edward Charles Thompson, Esq., M.B. Univ. Dub., L.R.C.S.I., Surgeon of the Tyrone County Infirmary, "for conspicuous heroism shown in trying to save the life of a child suffering from diphtheria."

DR. EMIL ZSIGMONDY, whose death we announced last week as having occurred while ascending one of the Dauphine Alps, was still young. It was only last winter that he took his degree of M.D., and since then he has been working under Professor Albert of Vienna. He had, however, already acquired a reputation as an intrepid mountaineer, which is proved by the fact that a glacier in the Tasman Mountains, New Zealand, is named after him. In the tour during which his death occurred Dr. Emil Zsigmondy, was accompanied by his brother, Dr. Otto Zsigmondy and Professors Schulz (of Leipzig), Kellenbauer (of Chemnitz), and Purtscheller (of Salzburg).

MESSRS. CROOKES, ODLING, and TIDY, in their report on the composition and quality of daily samples of the water supplied to London during last month, state that they have analysed 189 samples, the whole of which were found to be perfectly clear, bright, and well filtered. The exceptionally dry weather of July was not without effect on the character of the supply in respect to its degree of freedom from organic matter. Thus, the mean proportion of organic carbon present in the Thames-derived water delivered during the past month was only ·121 part in 100,000 parts of the water, while the maximum quantity present in any one sample was only ·146 part; the quantities constituting respectively the smallest monthly average and maximum that have been recorded during the year.

MR. G. FLEMING, principal veterinary surgeon to the army, speaking of glanders in army horses, states that, as is well known, the disease prevails always, more or less seriously, among the horses of civilians; but army veterinary surgeons have every reason to be congratulated on their being able to keep troop horses free from it in the midst of contagious centres, or, when it does chance to gain admission, to get rid of it promptly.

BRIGADE-SURGEON G. C. GRIBBON, medical officer in charge of the hospital-ship *Ganges*, which sails on the 27th inst. from Portsmouth Dockyard for Alexandria to convey the sick of the Nile expedition to England, has issued an appeal for newspapers, old magazines, &c., for the use of the sick in the coming voyage. We trust that the appeal will not be made in vain.

AT a recent meeting of the Melton Mowbray Local Board the whole of the members are reported to have tendered their resignation in consequence of a poll of the town having shown a majority of 216 against the proposal of the Board to provide waterworks for the town.

PROFESSOR GUSTAV BUNGE, on leaving Dorpat for Basle, has received an ovation, taking the form of a torchlight procession, from his former students, in which many from other faculties joined.

THE Church Missionary Society has appointed S. W. Sutton, M.D. Lond., B.S., and Gold Medalist in Surgery, to the Quetta Mission.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At a meeting of the members of this Association, held on the 14th inst., a letter was read from the Manchester and Salford Sanitary Association, asking the Association of Medical Officers to co-operate in the work of securing better means for the isolation of cholera cases. The president, vice-president, and secretary were appointed to confer with the Sanitary Association on the subject. Dr. Adams afterwards read a paper on the Water-supply and Storage for Rural Districts.

NURSING IN LONDON HOSPITALS.

To judge from the language of some of the advocates of the system of nursing pursued at University College Hospital, one would think that good nursing was the peculiar property and monopoly of sisterhoods. If so, the facts which we publish below will appear very strange and inexplicable. The authorities of London hospitals ought to know something about good nursing. It will be seen that only two of the eleven great hospitals nurse by sisterhoods. In all the others the authorities of the hospital retain their control over the nursing department. Which of the hospitals are right—the two which retain nursing by a sisterhood, or the nine which retain their control over the nursing department and dispense with sisterhoods? The logical issue of the extreme demands for sisterhoods would be very curious. It would follow that they should practically have all the nursing in their hands, and all the training of nurses, which is now so important a feature of hospitals. Such a result would be preposterous, and would put an enormous power in private families and in hospitals into the hands of ladies of one sect, and that a very extreme one. Comparisons of nursing now with the nursing of twenty years back, over which the friends of University College are exulting, are not to the point. Nursing has become a fine art since that time. It has been raised all round. There is still room for much improvement, but it is immensely better than it was in every hospital in town and country and good nursing is certainly no longer the monopoly of persons of one creed. The following are the facts concerning the principal London hospitals:—

1. *St. Bartholomew's Hospital.*—The nursing of this hospital is not carried on by a sisterhood, but is under the immediate control of the hospital authorities. There is an active work of training nurses connected with the hospital.

2. *University College Hosgital.*—Nursed by a sisterhood, who are not responsible to the hospital authorities.

3. *St. Thomas's Hospital.*—No connexion with a sisterhood. A matron and her nursing staff do the nursing under the immediate control of the hospital authorities. The title of "sister" is conferred, and has been from time immemorial, on the head nurse of each ward. Mrs. Wardroper has for many years been the superintendent of the nursing in St. Thomas's Hospital, and also of the Nightingale Training School for Nurses.

4. *Guy's Hospital.*—The nursing is not carried on by a sisterhood, and is entirely under the control of the hospital authorities. In accordance with the express desire of the founder, the appellative "sister" has been applied to the head nurse of each ward.

5. *London Hospital.*—The nursing is carried on under the immediate control of the hospital authorities.

6. *St. George's Hospital.*—The nursing is not carried on by a sisterhood, but is under the immediate control of the hospital authorities, the nurses being engaged by the governors.

7. *St. Mary's Hospital.*—The nursing of the hospital is under the immediate control of the hospital authorities. The hospital authorities train their own nurses, who come as probationers. These may be of any religious denomination.

8. *King's College Hospital.*—The nursing is carried on under the control of the Committee of Management, and not through a sisterhood.

9. *Middlesex Hospital.*—The nursing is carried on entirely under the control of the authorities. All the nurses are trained in the hospital, and are under the supervision of the Lady Superintendent.

10. *Charing-cross Hospital.*—The nursing is conducted by St. John's House.

11. *Westminster Hospital.*—The nursing staff is supplied by the Westminster Training School and Home for Nurses, called the "Home." The nurses are under the authority of the Lady Superintendent. The Home and the hospital each appoint annually three members of their own Managing Committee, called the Joint Nursing Committee. The chairman of this committee is a governor of the hospital. The committee hears and determines all questions referred to them respecting nursing matters. In cases of questions arising between the two institutions, not by the contract referred to the joint committee, and on which a mutual agreement cannot be arrived at, the matter is referred to two referees, not members of the committee or staff of either institution. They choose a chairman unconnected with either institution, and their appeal is final. Nurse-sisters cannot be dismissed by the Lady Superintendent without communication with the medical staff. In the event of conflict of opinion, the matter may be brought by the medical officers or the Lady Superintendent before the House Committee, who are required to refer it to the Joint Nursing Committee.

THE CHOLERA EPIDEMIC.

THE epidemic of cholera in Spain maintains the great severity it has now for some time past exhibited, and whilst additional provinces, such as those of Barcelona, Guadalajara, Salamanca, Ciudad Real, Logrono, Burgos, Huesca, Palencia, and Gamora, now add their daily list of deaths to those already published, there is no substantial sign of abatement in many of the districts first attacked. In a few provinces, however, some sign of diminution is observable, and it is to be hoped that this will be maintained, for already the mortality in localities attacked as far back as the month of June has been appalling in its magnitude. The daily number of cases now varies between 3000 and 5000, and the deaths between some 1400 and 1700; and it is evident that the smaller numbers are often due merely to the incompleteness of the reports procurable. In Madrid an average of some twenty cholera deaths a day is reported to have taken place for some time past, and it is certainly not easy to explain why the disease has not made further headway. It may, of course, be that much is now put down to cholera which would, under ordinary circumstances, come under the denomination of choleraic diarrhœa, and that the Asiatic disease has not succeeded in reaching the metropolis of the country. Or, on the other hand, those conditions necessary to the spread of the infection which are in excess of mere sanitary defects may be absent. Whichever explanation be the real one, it must be admitted that Marseilles exhibits very similar results. The disease began there by causing twelve deaths on August 2nd; the fatal attacks have since that date varied between that number and forty-four, the number recorded as having taken place on the 13th inst., and now the daily number of fatal attacks averages about twenty. That the disease, which is officially declared to be of the Asiatic type, should not have developed more rapidly is unusual, even taking into account the circumstance that a somewhat extensive epidemic occurred there last year.

So far there has been no further diffusion of the disease in its epidemic form. The cases reported from Gibraltar were probably only sporadic in type; and, although the disease is reported to have appeared on board a British vessel off Algeria, no extension took place.

Quarantine measures are now in full working in most European countries in so far as arrivals by sea from Spain and France are concerned, and in some instances antiquated and very vexatious land restrictions are imposed. The Italians, however, who invited the Sanitary Conference to meet in their capital, would appear to be in great measure following, as regards their land frontiers, the system which Dr. Thorne Thorne explained at the Conference was the one adopted as regards arrivals on our shores. Last year quarantine, lazarets, and all their accompaniments, were in full swing along the Franco-Italian frontier, but the disease disregarded them all. This year a system of inspection is in force. Only those appearing to be sick, or having clothing and effects which are dirty, are detained. The sick are isolated, and the others are kept under supervision pending the disinfection or destruction of their suspected articles. The healthy are allowed to pass on receiving a permit, and their intended arrival at the towns of destination is communicated to the syndics concerned. This is a step in the right direction, and we may regard it as the outcome of the information which was communicated to the Conference concerning the action taken in this country.

The Municipal Council of Rome have, as a measure of precaution, appointed a special commission, composed of Doctors Gatti, Durante, and Ferrero Gola, to visit the hospitals and report on their condition. The Minister of the Interior, too, in face of the danger of cholera spreading from Marseilles into Italy, has wisely thought it prudent to address a circular to the prefects and syndics, containing a series of directions for their guidance in case the disease should appear in their midst. These directions provide for immediate notification of the presence of the disease to the prefect; complete isolation of the patient, of the house in which he was taken ill, and of the persons living in it with him; rigorous disinfection; the establishment of economic kitchens and other means of improving the alimentation of the poorer inhabitants; and the provision of washhouses and stoves. The transport of and trade in rags and old unwashed clothes is to be immediately stopped, and all deposits of such things are to be rigorously disinfected. The holding of fairs, public markets, processions, public festivals, or anything of the kind which may lead to the excessive and prejudicial gathering together of persons, is to be prohibited. The circular concludes with expressions of reliance on the local authorities to carry out the directions it contains with that firmness and prudence which will prevent unnecessary alarm, and serve to maintain that tranquillity among the inhabitants which contributes so much towards diminishing the unhappy consequences of such a public calamity. At the same time the circular states that the Government, holding all officials responsible for their acts, will not tolerate the adoption of any arbitrary measures.

THE CLAIMS OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a very full meeting of the East Anglian Branch of the British Medical Association, held at Braintree on August 7th, Mr. ABBOTT read a paper on the Association of Members of the Royal College of Surgeons. He briefly explained the objects of the Association, and the reforms in connexion with the election of members of the Council of the College of Surgeons which the Association wished to bring about, and concluded by moving, "That this meeting protests against the conduct of the Council of the Royal College of Surgeons of England in refusing all the demands of the Members."

This was seconded by Dr. KELLETT of Halstead.

The PRESIDENT (Dr. Elliston of Ipswich) said he had not felt very warmly on the subject, except that he thought every Fellow of the College should be allowed, at all events, to vote in the election of members of the Council. As to whether that privilege should be extended to all the Members of the College he was open to conviction, but he had always thought it would be sufficient if Members who had attained the distinction of Fellows of the College were allowed to vote by paper instead of being compelled to be present in London; this, he thought, would be an important reform. Whether that should be advanced a stage further and every Member should have the privilege now accorded to a Fellow, it was for that meeting to say by passing or rejecting the resolution. For himself he was convinced that it was necessary that Members should claim the privileges to which the resolution referred.

Mr. C. B. KEETLEY, F.R.C.S., said he felt sure that all the Fellows who wished an alteration in the constitution of the College would like the whole of the Members to have as much power in the management of affairs as they themselves had. Of course, he was only speaking for himself, as a Member and a Fellow as well; and he did not consider that when he became a Fellow he became better able to form a reasonable opinion on the matters which come before the College than when he was a plain Member. If the subjects which came before the College were pure surgery there might be some excuse for keeping matters in the hands of the Fellows, but, in truth, all the subjects which came before the Council were purely business and general matters, upon which it was not at all in possible for a Member to have as good an opinion as a Fellow. He thought it would be difficult to prove that an individual who has paid £20 to the College had not as much right to a voice in the management of its affairs as one who had paid £40 or £50.

The resolution was carried unanimously.

THE CONTAGIOUS DISEASES ACTS.

DURING the discussion on the Criminal Law Amendment Bill in the House of Commons on the 7th inst., Sir Richard Cross observed that, "so long as the Contagious Diseases Acts were properly worked, there were no girls under sixteen on the streets of the towns to which the Acts applied." In stating this, Sir Richard paid a well-earned compliment to the metropolitan police, who had performed difficult and delicate duties with so successful a result. Mr. James Stuart, who followed the Home Secretary, took an opposite view, denying the truth of any check having been given to juvenile prostitution by means of the Acts; and arguing that, even it were true, the means were immoral. By a curious coincidence, the Select Committee of the House of Lords, which was appointed to consider the laws relating to the protection of young girls, sat while the Select Committee of the House of Commons appointed to inquire into the Contagious Diseases Acts was also sitting. And in their report the Commons' Committee give the following as the result of their inquiry, so far as it related to juvenile prostitution:—

"The returns of the department of the metropolitan police, which administers the Acts, have shown since the introduction of the system a continuous and great decrease in the number of juvenile prostitutes in the subjected districts. This evidence is borne out by the testimony of persons well acquainted with the condition of many of those places. As juvenile prostitution is the principal source by which the supply of fallen women is kept up, it is evident that the Acts, in diminishing the number of youthful prostitutes, are operating effectually to diminish the number of adult women abandoned to an evil life. Many cases were detailed to your Committee in which young girls who were either on the point of falling or had already fallen were rescued by the intervention of the metropolitan force, and restored to their families. But cases of this kind are few in comparison with the numerous class in which the deterrent influence of the Acts frightens young girls from vice. It is to be remarked that while a constant decrease in juvenile prostitution has gone on in the subjected districts, the Committee of the House of Lords appointed to consider the subject and other kindred topics in 1881, states in its Report, dated July 10th, 1882, that 'juvenile prostitution, from an almost incredible early age, exists to an appalling extent in England generally, and especially in London.' Their Lordships attribute its prevalence mainly to certain specified causes. Every one of these causes has been proved to your Committee to be vigorously and effectively counteracted by the administration of the Contagious Diseases Acts, so that the alleged reduction of juvenile prostitution in the subjected districts is borne out by the fact that the influences stated by the Committee of the House of Lords to be its principal source are deprived of much of their strength, where the administration of the Acts is brought to bear against them. The causes referred to are:—

"1. The want of parental control. This is remedied by the information which the police give parents as to the dangers of their daughters, and by the authority which the police exert for the reclamation of young girls.

"2. Residence in brothels. As already shown, it has been proved to your Committee that the police exert their power with excellent effect to prevent brothel-keepers from harbouring young girls.

"3. The example and encouragement given by girls slightly older. The deterrent influence of the system acts effectually against the temptation.

"4. The state of the streets, 'in which little girls are allowed to run about and become accustomed to the sight of open profligacy.' Your Committee find that the Acts have much improved the condition of the streets, and repressed public disorder and indecency among fallen women, thus removing much of the bad example which was formerly to be seen in subjected districts."

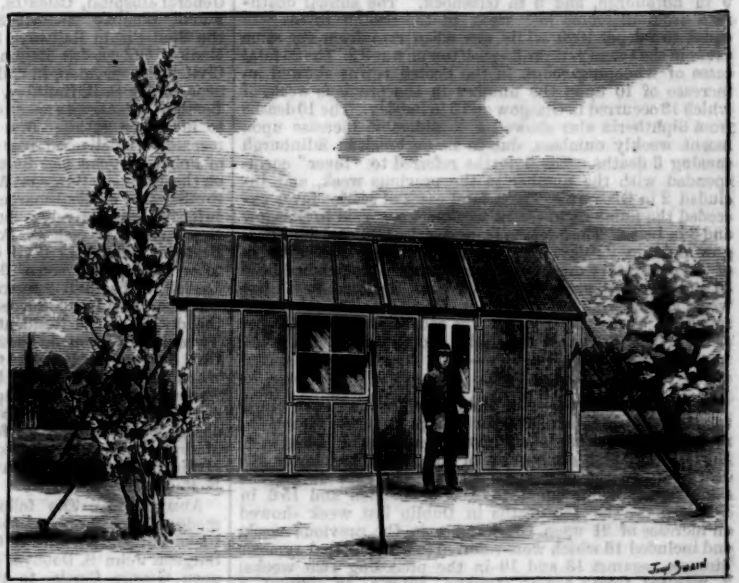
What may be the effects of the Criminal Law Amendment Bill, which has now become law, remains to be seen. It may be safely predicted, however, that it will not replace the Contagious Diseases Acts, the renewal of which will be demanded in their various districts at the coming general election in a manner which parliamentary candidates will not be able to mistake.

WILLESDEN PATENT PORTABLE INFECTIOUS DISEASES ISOLATION HOSPITALS.

THESE hospitals have been introduced to supply the want of a ready means of isolating fever and small-pox. Each consists of a wooden framework into which panels of Willesden roofing are fitted. The interior is also lined with panels, thus leaving an air chamber between the inner and outer walls. The outer and inner panels can be removed altogether or adjusted for ventilation as occasion requires. They are usually made 16 ft. long by 11 ft. wide, to contain three beds. The Corporation of Liverpool adopted Willesden roofing for their permanent fever hospitals at Park-hill, which we understand are giving general satisfaction.

The advantages claimed for these hospitals are:—1. Willesden roofing gives a better average temperature than any other roof covering. 2. The ventilation is excellent, being cool in hot summer weather, and warm in cold winter weather. A stove can easily be added. 3. The nurse can remove any panel, and so have as much air as necessary. 4. In hot weather the panels of the outer roof can be pulled down a few inches, when the air will circulate between the double roof and keep the room cool; also, if the upper ends of the outside panels are opened (the buttons being turned down so as to keep them open), the air will circulate between the surfaces from the holes in the bottom plate made for this purpose, and the walls are thus kept cool; again, if the outer panels are closed and the inner ones kept open in the same way, the whole of the sides become one large Tobin tube, and fresh air enters (without draught to the patient) along the whole of the wall plate. 5. A hospital 16 ft. by 11 ft. can be easily drawn by one horse. 6. No bolts to get set, or ropes to break or slacken. 7. This hospital can be erected anywhere in two hours. 8. The panels can be all placed in any chamber and saturated with sulphur.

These hospitals have been also erected at the Bromley, Sevenoaks, and other unions. Fuller information may be obtained at 34, Cannon-street, E.C., than we have space for here. Willesden roofing is made from fibre and copper, and was largely used in the late Egyptian campaign for military huts and water-tanks, and is one of the few materials which will withstand the ravages of the white ant.



VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6144 births and 3497 deaths were registered during the week ending the 15th instant. The annual death-rate in these towns, which had steadily increased in the preceding seven weeks from 17·6 to 21·8, declined again last week to 20·5. During the first six weeks of the current quarter the death-rate in these towns averaged 20·1 per 1000, against 21·7, the mean rate in the corresponding periods of the nine years 1876-84. The lowest rates in these towns last week were 12·4 in Bradford, 14·5 in Derby, 15·2 in Wolverhampton, and 15·6 in Bolton. The rates in the other towns ranged upwards to 25·8 in Birkenhead, 27·4 in Salford, 30·5 in Manchester, and 33·8 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had increased from 448 to 930 in the previous seven weeks declined again to 833 last week; these included 549 (79 fewer than in the previous week) from diarrhœa, 98 from measles, 84 from whooping-cough, 46 from "fever" (principally enteric), 28 from scarlet fever, 15 from diphtheria, and 13 from small-pox. These diseases caused the lowest death-rates last week in Huddersfield and Bradford, and the highest in Sheffield, Salford, and Preston. The annual death-rate from diarrhœa last week which averaged 3·2 per 1000 in the twenty-eight towns, ranged upwards to 5·1 in Sheffield and Newcastle-upon-Tyne, 5·2 in Leeds, 7·4 in Salford, and 10·4 in Preston; the rate in London fell to 2·8. The greatest mortality from measles was recorded in Newcastle-upon-Tyne and Birkenhead; from whooping-cough in Wolverhampton and Plymouth; from scarlet fever in Sunderland; and from "fever" in Hull, Portsmouth, and Cardiff. The 26 deaths from diphtheria in the twenty-eight towns included 13 in London. Small-pox caused 26 deaths in London and its outer ring (excluding 3 in the Metropolitan Asylum Hospital and camp at Darenth), and 1 in Hull. The number of small-pox patients in the Metropolitan Asylum Hospitals situated in and around London, which had steadily declined in the preceding ten weeks from 1389 to 518, had further declined to 399 on Saturday last; the admissions, which had declined in the previous four weeks from 118 to 43, were 44 last week. The deaths referred to diseases of the respiratory organs in London, which had been 172 and 184 in the two previous weeks, declined last week to 162, and were 29 below the corrected average. The causes of 70, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Norwich, Derby, and Plymouth. The largest proportions of uncertified deaths were registered in Huddersfield, Halifax, Blackburn, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 17·6 and 19·8 per 1000 in the preceding two weeks, further rose to 20·4 in the week ending the 15th inst., but was 0·1 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 8·3 in Perth and 11·9 in Aberdeen to 22·9 in Paisley and 25·6 in Glasgow. The 497 deaths in the eight towns included 64 which were referred to diarrhœa, 23 to whooping-cough, 10 to diphtheria, 8 to scarlet fever, 6 to "fever" (typhus enteric, or simple), 5 to measles, and not

one to small-pox; in all, 116 deaths resulted from these principal zymotic diseases, against 64 and 82 in the preceding two weeks. These 116 deaths were equal to an annual rate of 4·8 per 1000, which was 0·1 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhœa in the eight towns, which had steadily increased in the preceding seven weeks from 6 to 53, further rose last week to 64, and were 13 above the number in the corresponding week of last year: 40 occurred in Glasgow, 9 in Edinburgh, and 8 in Greenock. The annual death-rate from diarrhœa last week in the Scotch towns was equal to 2·6 per 1000, while the mean rate from the same cause in the twenty-eight English towns was 3·2. The 23 fatal cases of whooping-cough in the Scotch towns showed an increase of 10 upon the number in the previous week, of which 13 occurred in Glasgow and 5 in Paisley. The 10 deaths from diphtheria also showed a considerable increase upon recent weekly numbers, due to an outbreak in Edinburgh causing 6 deaths. The 6 deaths referred to "fever" corresponded with the number in the previous week, and included 2 in Glasgow. The 8 fatal cases of scarlet fever exceeded the numbers in recent weeks: 4 occurred in Glasgow and 3 in Leith. The 5 deaths from measles included 2 in Glasgow and 2 in Paisley. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 55 and 62 in the preceding two weeks, declined to 43 last week, and were 22 below the number returned in the corresponding week of last year. The causes of 74, or 14·9 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 23·3 and 19·8 per 1000 in the preceding two weeks, rose again to 22·9 in the week ending the 15th inst. During the first six weeks of the current quarter the death-rate in the city averaged 22·6, the rate during the same period being equal to 20·5 in London and 15·6 in Edinburgh. The 155 deaths in Dublin last week showed an increase of 21 upon the number in the previous week, and included 18 which were referred to the principal zymotic diseases, against 13 and 19 in the preceding two weeks; 7 resulted from "fever" (typhus, enteric, or simple), 5 from diarrhœa, 4 from measles, 2 from scarlet fever, and not one either from small-pox, diphtheria, or whooping-cough. These 18 deaths were equal to an annual rate of 2·7 per 1000, the rate from the same diseases being 3·7 in Edinburgh and 4·7 in London. The 7 deaths referred to "fever," showed a considerable increase upon the numbers in recent weeks, and the deaths from measles were also more numerous; the fatal cases of diarrhœa and measles showed, however, a decline of 3 and 2 respectively from those in the preceding week. Eight inquest cases and 3 deaths from violence were registered; and 24, or more than a sixth of the total deaths, occurred in public institutions. The deaths both of infants and of elderly persons showed a marked increase upon the numbers in the previous week. The causes of 33, or more than 21 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

The hospital ship *Ganges*, from Alexandria, arrived at Portsmouth on the 18th inst. She brought home 13 officers and 161 military invalids, including 84 cot cases and 24 naval invalids and details, consisting of 10 officers, 5 men, and 2 National Aid nurses. There were a few cases of dysentery on board. The bulk of the men had been invalided through fever, but became convalescent during the voyage.

WAR OFFICE.—Army Medical Staff: Brigade Surgeon Hector Ferguson retires on retired pay, with the honorary rank of Deputy Surgeon-General. Grenadier Guards: Surgeon-Major J. H. C. Whipple, M.D., retires on retired pay, with the honorary rank of Brigade Surgeon.

In our issue of July 25th Surgeon-Major W. C. Maclean, M.D., C.B., retired list, Madras Army, should have been described as having had the local rank of Inspector-General of Hospitals whilst holding the appointment of Professor of Military Medicine at the Army Medical School, Netley.

INDIA OFFICE.—The Queen has approved of the following promotion made by the Government in India:—Surgeon-Major William Farquhar, M.D., of the Madras Medical Establishment, to be Brigade Surgeon. The following admissions have been made to Her Majesty's Indian Medical Service:—Francis James Drury, Herbert Jekyl Dyson, Fredk. Arthur Rogers, and Edward Richard William Charles Carroll, to be Surgeons in the Bengal Medical Establishment. Surgeon A. Barclay, M.B., is confirmed in the appointment of Secretary to the Surgeon-General and Sanitary Commissioner with the Government of India, with effect from April 1st, 1885, and Surgeon G. Harris as 2nd Resident Surgeon, General Hospital, Calcutta, from same date; Surgeon G. E. Fooks, Bombay Medical Staff, to be Medical Officer of the Sind-Pishin Railway; Surgeon J. Crimmin, Officiating Medical Officer, 4th Regiment, Bombay Infantry, to act as Civil Surgeon, Aden, in addition to his other duties; Surgeon-Major S. B. Halliday, Medical Officer, 13th Regiment, Bombay Infantry, to act as Civil Surgeon, Rajkot, in addition to his other duties; Drs. Sidney Smith and J. H. Potter respectively delivered over and received charge of the office of Police Surgeon and Surgeon to the Coroner of Bombay on the 5th inst.; Surgeons A. Duncan, J. Smith, and S. Bigger to officiating medical charge of the 5th, 19th, and 29th Bengal Infantry, respectively; Surgeon C. Monks, Indian Medical Department, to act as Port Surgeon, Aden; Surgeon W. Beatson, Officiating Civil Surgeon of Jessore, is appointed to act as Civil Surgeon of Darbhangah; Surgeon-Major E. G. Russell, to be Civil Surgeon of Nuddea; Surgeon-Major R. Bonman, Residency Surgeon at Baghdad, takes charge of the duties of the Resident pending the arrival of Colonel Tweedie; Surgeon J. Anderson, of Moradabad, officiates as Civil Surgeon of Allahabad till the beginning of cold weather, when he will be relieved by Surgeon-Major Cameron, Civil Surgeon of Nainee Tal; Deputy Surgeon-General J. Henderson, M.D., has been posted to the administrative medical charge of Her Majesty's forces in the western districts of Madras; and C. G. R. Storie, M.B., C.M., to be Principal Medical Officer to the Sarawak Government, in place of Dr. E. P. Houghton, retired.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon Thomas H. Knott, to the *Hecla;* Fleet Surgeon George A. Campbell, to the *Malabar;* Fleet Surgeon John S. Dobbyn, M.D., to the *Rupert;* Fleet Surgeon George Curtis, to the *Devastation;* Surgeon Miles O'C. Swiney, to the *Rupert;* and Surgeon William G. Jack, to the *Devastation.*

Correspondence.

"Audi alteram partem."

THE SANITARY CONDITION OF WINDSOR.

To the Editor of THE LANCET.

SIR,—The report on the Sanitary Condition of Windsor which appeared in your last number is very injurious to the credit of the town and to my own reputation. I must ask you, therefore, in justice to give equal publicity to my reply, for I am able to show that the accusations which the report contains are, for the most part, unfounded or frivolous. I will take them *seriatim.*

1. That the mortality during the summer has been above the (local) average is given as a reason for this inquiry. There can scarcely be a district, out of Ireland, where the death-rate is *always below the average.*

2. The recent occurrence of an epidemic of measles and of a single death from enteric fever, which was the first recorded for five years, are facts which do not need an apology.

3. The defective state of our bye-laws is noticed, this criticism being taken from my own report. But the complaint is now out of date, for a proposed new code is already in print.

4. The so-called "poisonous ditch" (the Bourne ditch) is a brook on Crown property. I myself made a special report upon it two years ago, and if the recommendations I then made have been neglected the Commissioners of Woods and Forests must bear the blame.

5. The slum which is said to be a *hotbed of epidemic disease* was described in a local magazine, from which your Commissioner drew his inspiration as South-place. In this alley, which has a population of more than 170, not a single death from any form of infectious disease is recorded to

have occurred for five years. During that period the total death-rate in it has been at the rate of about 20 per 1000 per annum. (I have taken as its average population the mean of two estimates given in the report.) This place is perhaps our most considerable slum.

6. The allegation that there are open *ditches which receive refuse soil, &c.*, is wholly untrue. I know of no *filthy drain without water*. There are no *cesspools* known to exist within the town, and a very few in the suburban district. *Complaints of sewers that smell* have been seldom made and always attended to.

7. It is true that we have no fever hospital, and the gravity of this defect will be variously estimated. The sanitary authority has, however, bought a piece of land suitable for the erection of a temporary hospital if necessary.

8. Here is a specimen of reckless assertion. It is said that a man suffering from small-pox (a year ago) was allowed to walk abroad when the disease was at "the most contagious stage." The fact is that the regimental surgeon in attendance gave it as his opinion that the man could not be said to be infectious at all. I was certainly surprised at the time, but I suppose the doctor was right, for the man did, in fact, infect nobody.

9. Certain houses in one court have no back windows, and others have no back premises, the inhabitants having the right to use w.c.'s and washhouses at the other end of the alley. A serious fault, certainly, but one for which there is no remedy, for I do not think I should be justified in condemning the houses as unfit for habitation.

10. The water from pumps in Red-lion-row and Collins's-buildings is said to "*effervesce from decomposition of organic matter*," and wells in King's-terrace are pointed to as especially dangerous. It is less than a year since I tested samples from both the first-named wells and from three of the latter, and I found the water in each case to be satisfactorily pure.

11. Next follows the most absurd charge of all. Your Commissioner, copying the *Trinity Magazine*, says that the inhabitants of Windsor "are allowed to drink contaminated water"; the ground for this assertion being the fact that having myself analysed, or caused to be analysed, the water from all the wells in more or less public use, and caused all wells found to be polluted to be closed, I cautioned the owners of private wells, urging them to take the like precaution.

12. The defective closet accommodation in some parts of the town was reported on by me two years ago, before I had been a year in office. Proceedings have dragged on somewhat slowly, but many notices calling upon the owners to remedy this defect were served several months ago, and steps are now being taken to deal with defaulters. That many w.c.'s have no supply of water is unfortunate, but the sanitary authority has been advised that a remedy for the defect cannot be enforced in the case of existing buildings.

13. *Dustbins without covers* exist in Windsor as elsewhere. I have been unwilling to compel the erection of new bins, for I aim at abolishing them altogether.

14. *Ditch in Clewer-house-lane.*—There is no such lane and no such ditch in the borough. A lane outside the district is probably intended.

15. That part of the town is subject to floods is unfortunate, though careful observation has failed to show me that the health of the inhabitants has suffered thereby. But the sanitary authority can neither prevent the river from overflowing nor houses from being built in the low-lying district.

16. Overcrowding is uncommon in Windsor. I have met with no more than two or three serious cases this year in about 100 cottages, mostly of the poorest sort, which I have inspected.

In conclusion, I would point to our statistics for two years during which I have held office. A mean total mortality of 13·4 per 1000, a zymotic rate of 1·0, and an infantile death-rate of 8·5 per 100 births are creditable facts which cannot be explained away, and which show the absurdity of this outcry. I am, Sir, yours truly,

EDWARD CASEY, M.D. Lond.,
Medical Officer of Health.

Park-street, Windsor. Aug. 18th, 1885.

*** We are too well acquainted with the difficulties by which a medical officer of health is surrounded, especially in a small borough town, to have ever attempted or desired to find fault with Dr. Casey. Nor did the criticisms of our Commissioner confine themselves solely to his district. Thus the public, whose general interests it is our object to defend, will not be satisfied because the Commissioners of Woods and Forests are, according to Dr. Casey, responsible for the condition of the Bourne ditch, or because the ditch in Clewer-house-lane happens to be without the borough boundary. It was not stated in our report who was responsible; that is a matter for the authorities at Windsor, and not necessarily for us, to decide. Then, again, we never stated that there were cesspools overflowing into ditches in Dr. Casey's district. Probably the neighbourhood of Spital, where we received these complaints, is beyond his limits, but with this we do not concern ourselves. That Dr. Casey should disclaim responsibility for a district and a brook beyond his control is only natural; but there, we might suggest, the reply should have ended. To state there has been no death from epidemic disease in a population of about 170 persons during five years does not exonerate the district, which was previously severely tried by small-pox and cholera. It is sufficient that the death-rate of this locality is half as high again as the general death-rate of the borough, but even were it not so, too much reliance should not be placed upon the absence of a high death-rate. We would, on this point, refer Dr. Casey to our annotation on "Sickness-rate and Death-rate," in this week's issue. Dr. Casey's reply, indeed, creates the impression that the sanitary authority have taken considerable pains to ascertain the existence of evils, the remedy of which they could *not* enforce. But Dr. Casey sufficiently acknowledges that neglect exists when he states that the defective closet accommodation was reported by him two years ago. Proceedings have, indeed, "dragged on slowly," seeing that steps are *now* being taken to deal with defaulters. The unsatisfactory condition of houses as to state of repair, ventilation, closet accommodation, and water-supply, the absence of means for isolation of infectious cases, and the imperfect condition of borough bye-laws, are, we assert, facts which remain unchallenged or uncontradicted. It is satisfactory to know that the sanitary authority *now* propose to carry out the duties which have for many years devolved upon them, and inspect their district "with a view to ascertain what nuisances exist calling for abatement."—ED. L.

To the Editor of THE LANCET.

SIR,—As you have given publicity to the views of your Commissioner on the sanitary condition of Windsor, may I, on behalf of the sanitary authority, ask that, with the usual fairness of the English press and the usual courtesy of the English editor, you will be good enough to give equal publicity to the other face of the picture.

It is perfectly clear that your Commissioner has mainly founded his report, or rather his indictment of the sanitary authority, not on what he saw for himself, but on the statements made in a certain local magazine, which has gained an unenviable reputation for exaggeration, and is notoriously published solely in the interest of one of the clergy. What your Commissioner saw with his own eyes amounted to no more than this: In two cases old houses badly planned; in two cases closet-pans not properly washed down; one gully temporarily stopped; one or two heaps of house refuse that had not been cleared on the day of his visit; one house (since his visit put in order) with defects in its house-drains; two houses with cases of measles in them; one house with a hole in its ceiling; and to put a fitting climax, another on the walls of which vermin had been crushed. And on this he has ventured to found a sweeping condemnation of the sanitary authority and its officers. We exclude all the matter that he has copied *verbatim et seriatim* from the pages of the magazine referred to, for there is no justification whatever for his accepting those statements without personally ascertaining their truth. Had he discharged his duty to you in that respect, he would have found that only so much as related to the past was founded on actual fact, and that he should have given due credit to the sanitary authority for remedying the evils that once existed. On the simple authority of this magazine your Commissioner dares to assert that the urban district of Windsor contains a poisonous

ditch; that the inhabitants are allowed to drink contaminated well-water; that there are hotbeds of disease in the town; and that there are open ditches which receive refuse, soil, or the overflow from cesspools. To these statements, categorically made, we unhesitatingly and categorically give the plainest denial; and we call upon you, Sir, after satisfying yourself that they are as untrue as you will find them to be, to frankly withdraw them. As for complaints about sewers that smell, if they are made at all, it must be to the editor of the magazine of unenviable notoriety, who declines to furnish information of any sort to our medical officer, and whose *bona fides* and veracity are thus more than impugned.

It is untrue that no provision has been made for infectious diseases. Land has been bought for the erection of a temporary hospital, and the plans are prepared for such a building, which could be erected in a few days if it were needed. It is untrue to say that the people of Windsor are allowed to drink impure water, for all wells open to public use have been examined, and those found to be contaminated have been immediately closed.

If your Commissioner had acted fairly, he would have mentioned the fact that the member for Windsor had built large numbers of cottages, wholesome and airy, and had rebuilt or shut up a large number of cottages that were not up to the times; and that other holders of cottage property had followed his example. It is true that the bye-laws have not been altered since 1871, but it is also true, and should have been stated, that new bye-laws framed on the model issued by the Local Government Board are now under consideration, and will shortly be put in force.

Your Commissioner should have made it his duty to distinguish the urban from the rural district. Some of his statements clearly relate to Spital, beyond the borough. He might also have taken pains to learn the correct name of every locality. He would not then have spoken of such a spot as Clewer-house-lane, which does not exist. Possibly his reference is to a lane considerably beyond the borough, and not, therefore, under the jurisdiction of the urban sanitary authority. His endeavour to explain away our low death-rate thoroughly accords with the spirit of his whole attack. We may add that, as a sanitary authority, we will gladly welcome and will furnish the fullest information to any gentleman named by the Local Government Board, and, if we have failed to put in force all the sanitary powers we possess, to put ourselves under his guidance in the matter.

In conclusion, we would in all courtesy suggest to your Commissioner that he has hardly done well to make your columns a vehicle for sounding the praises of a gentleman who has distinctly refused to co-operate in sanitary matters with the proper authorities, and who seems to think it his duty to vilify the town and to make personal attacks in the worst possible taste upon the representatives of his parishioners.

I am, Sir, yours faithfully,

Windsor, August 17th, 1885. J. OBERLIN HARRIS, Mayor.

*** Mr. Harris is mistaken. Our Commissioner wrote concerning facts which he observed for himself after careful inspection of Windsor. He did not limit his observation to the district of the urban sanitary authority, and some of his statements refer to conditions not within the jurisdiction of this authority; but there is sufficient within the borough to require the serious attention of the Town Council. We would, moreover, point out to Mr. Harris that a hospital for infectious disease, to be of service to a district, must enable the *first* cases of an outbreak to be isolated, and should therefore be ready at any moment. Another and important part of its uses is to educate the inhabitants of a district to consent to removal. The existence of a piece of land in Windsor will not do this. We are glad to hear that all water from public wells has been examined and the wells closed when polluted, and would recommend that private wells be treated in the same way.—ED. L.

BILHARZIA.

To the Editor of THE LANCET.

SIR,—Although we know from Griesinger, who discovered the eggs of bilharzia in a case of that disease in the left ventricle of the heart,[1] that they may pervade the general circulation, we were not aware till last year that the ova of the distomum hæmatobium would exist in other organs of the human body than the rectum, bladder, and mesenteric glands. In two cases of bilharzia I found them for the first time, also in the liver, kidneys, and prostate.[2] In a large number of cases I missed them in the spleen, pancreas, and the thoracic organs, although every case was carefully examined. As I know by personal communication, and your correspondent mentions it in THE LANCET of July 18th, that Dr. Mackie of the Deaconesses' Hospital found the ova in the lungs, it is therefore the second time that ova of distomum have been found in the general circulation. Dr. Mackie was kind enough to give portions of the lungs to some of his colleagues here, myself among the number, and everyone of us detected the ova. The portions I received were exceedingly soft and somewhat macerated, and therefore it was impossible to make good sections for an accurate examination of the localisation of the ova in that organ. I made several sections by the freezing microtome, and the only positive thing to be said is that a few eggs of bilharzia were in the peribronchial parts of the organ. With none of my preparations could I find the details given in the *Unione Medica Egiziana*. I have sent a preparation to Dr. Cobbold, which is now in his possession, and I beg to-day to forward another for your own verification. (See figure.) For us it is of great importance that the eggs of bilharzia are found in the general circulation, and other cases will not fail to show the pathological alterations caused by the eggs to the lung. But the discovery of this important fact is due to Dr. Mackie (not mentioned in the annotation of THE LANCET of July 25th), and to none other, as, beyond the *Unione Medica Egiziana*, I understand that in the best Arab scientific paper, the *Muftatah*, published in Cairo, there are mentioned one or two other discoverers of the eggs of bilharzia in the lungs of the same case.

Ovum of Bilharzia, with degenerated contents lying in the interlobular tissue. Drawn from specimen sent by Dr. Kartulis. (× 250.)

I am, Sir, your obedient servant,

Alexandria, August 10th, 1885. S. KARTULIS, M.D. Berl.

[1] Vide Cobbold on Parasites, p. 53.

[2] Memoir published in Virchow's Archiv, vol. xcv., 1885.

AN INTERESTING CASE FOR DIAGNOSIS.

To the Editor of THE LANCET.

SIR,—*A propos* of Dr. Fenwick's recent series of papers in THE LANCET, the following may be of some interest to your readers:—

On Feb. 5th, 1884, I was called to see E. F——, aged fifty-three, a widow, the confidential servant of a family in whose employ she had been for over eighteen years. She gave the following history: Had never been ill before to the extent of requiring medical treatment, but for the past few weeks had had an increased pressure of work, chiefly in superintending and assisting in getting her mistress's town house prepared for an expected accouchement, which had taken place a few days before my visit. On the day above mentioned, however, she had hurried a little extra with her work, which necessitated her going several times to the top of the house (a high one), and had then walked rapidly to the Great Western Railway Station to meet a train. On arriving on the platform she was suddenly seized with a severe pain in the epigastrium, which "doubled her up" and caused her to feel faint and sick. She did not vomit, but was so ill as to require removal home in a cab. The pain

increased and extended to her left scapular and clavicular regions. Too ill to walk, she was carried upstairs and put to bed. Her bowels had acted twice in the morning, normally. Her breakfast had been taken in the usual way, and consisted of two slices of bread-and-butter and a cup of tea. She was of spare build, active in mind and body, cheerful, and as I have said before, had had no necessity for medical consultation. I found her lying on her back with her knees drawn up, face anxious, pinched, and pale, with a cold, clammy skin. Pulse 108, small and regular; respiration 24; temperature 97·0°. Tongue clean; perfectly conscious; pupils equal, normal. Complained of much pain in the epigastrium, which was very sensitive to slight, but less so to deep pressure. A well-marked pulsation was visible in this region, and marked dulness extending towards left hypochondrium covering a space as large as one's hand. Auscultation revealed a very distinct blowing bruit, systolic in time, heard most plainly immediately over the aorta, diminishing in intensity towards the left side; heard slightly opposite the tenth and eleventh dorsal vertebræ, totally distinct from the heart-sounds, which were normal, as was also the site of the apex impulse; lung sounds normal. I placed her on ten minims of tincture of opium every three or four hours, and ordered linseed poultices with laudanum to the epigastrium.

Feb. 6th.—Tongue coated with slimy fur. Thirsty. Temperature 100°; pulse 120, small. Bowels not open since yesterday. The abdominal bruit has disappeared. Great tenderness still exists over epigastrium and upper part of left chest. Has taken beef-tea and ice. On palpation the dull portion seems to contain fluid. On this occasion she was seen in consultation by Dr. George Johnson. We concluded she was suffering from an undiscovered abdominal aneurysm, which had ruptured through part of its coat and become diffused. The same line of treatment was persevered in. At 10 P.M. the pain was less. Pulse 132, more feeble; temperature 100°; respiration 34, shallow. Still quite conscious Evidently sinking.

The patient died at 8 A.M. on Feb. 7th.

An inspection of the abdomen was made on the 8th, when the following condition was disclosed. In the peritoneal cavity were found small portions of ill-masticated orange-peel (we afterwards ascertained she had sucked an orange and eaten some of the peel), with some flocculent particles and brown-coloured fluid (doubtless nourishment taken during her illness). On opening the stomach a perforation at the base of an ulcer, as large as a florin, through which one could easily pass the little finger, was observed just below the cardiac orifice on the front surface of the organ, while immediately opposite was another ulcer about the same size, which, however, had no perforation. The intestines and other abdominal viscera were not removed, but were apparently normal. The aorta and vessels were natural.

I am, Sir, yours obediently,

Edgware-road, W., Aug. 8th, 1885. HERBERT J. CAPON.

THE CENTENARY OF DIGITALIS.

To the Editor of THE LANCET.

SIR,—The forthcoming publication by Professor Fraser of the results of his researches into the physiological action and therapeutic uses of strophanthin, the new member of the digitalis group, will serve to emphasise in a manner that would otherwise be impossible the centenary of the introduction into medical practice of digitalis. It is just a hundred years since Dr. William Withering, physician to the General Hospital at Birmingham published his well-known "Account of the Foxglove and some of its Medical Uses." He worked at the subject for ten years before he felt justified in giving the world the fruits of his experience. It appears from the preface to his monograph that in 1775 he was requested to give an opinion on the value of a family recipe for the cure of dropsy. Its composition was known only to an old woman in Shropshire, who had often accomplished cures after the more regular practitioners had failed. The effects produced were said to be violent purging and vomiting, the diuretic action being overlooked. The medicine was composed of twenty different herbs, and a very little investigation served to show that the only one possessing active medicinal properties was the foxglove. Dr. Withering's interest in the subject was stimulated by hearing that Dr. Cawley, the Principal of Brasenose College, Oxford, had been cured of a hydrops pectoris by an empirical exhibition of the root of this plant, after some of the first physicians of the age had declared that they could do no more for him. He learnt, too, that a person in the neighbourhood of Warwick had a famous recipe for dropsy, the active ingredient of which was known to be digitalis, and that in some parts of Yorkshire foxglove tea was highly esteemed for this purpose. He at once commenced making observations on his own patients, and at his suggestion it was tried at the Royal Infirmary in Edinburgh by Dr. Hope and Dr. Hamilton. The results seem to have been satisfactory, for in February, 1779, Dr. Stokes made a communication on the subject to the Medical Society of Edinburgh. Dr. Withering's observations excited considerable opposition; but he consoles himself with the reflection that "after all, in spite of opinion, prejudice, or error, time will fix the real value upon this discovery, and determine whether I have imposed upon myself and others, or contributed to the benefit of science and mankind." The hundred years which have elapsed since these words were written have afforded an ample opportunity of proving the inestimable value of the drug.

I remain, Sir, yours obediently,

Weymouth-street, W. WILLIAM MURRELL, M.D.

A SUSPICIOUS CASE.

To the Editor of THE LANCET.

SIR,—The following case may interest your readers, and by provoking discussion benefit the community at large. I can find no parallel case in any work. I have access to Taylor's, Guy's, and Casper's Jurisprudence.

On April 9th last a message came to me that H. H—— was about to be confined. I sent my assistant to attend her, and she was safely delivered of a female child (illegitimate) that day. For some time after he called daily, and reported to me that mother and child were in a favourable state. On the 19th the child died. I called that evening at the cottage, and informed the mother, grandmother, and brother that as I could not certify the cause of death it would be necessary to have a post-mortem examination. They agreed to this. Accordingly, next day, I, with my assistant and two fourth-year's students, performed the necessary operation, and this is what we found. On external inspection the child was seen to be slightly under the average size of an infant ten days old, but was mature and comparatively well nourished. The body was cold and post-mortem rigidity well marked. Death had taken place about twenty-four hours before examination. There was great lividity on the head, trunk, and limbs. There were no external marks of violence. On opening the thorax great turgescence of the contents was observable. The pericardium was normal and contained a small quantity of pericardial fluid. The right auricle and right ventricle of the heart were engorged with blood. The left side of the heart was empty, with the exception of a very small clot of blood in the left ventricle. The foramen ovale was partially closed. The inferior and superior vena cava were filled with blood-clot. The aorta was empty. The lungs were engorged with blood, and showed very dark-coloured patches here and there on the surface. Crepitation was present, and portions of the lung which were cut off floated in water. The thymus gland was large and normal. The trachea, larynx, and bronchi were normal, with the exception of a slight congestion of the mucous membrane in the left bronchus near the bifurcation of the trachea. The stomach was empty, excepting that there was a little mucus tinged with bile in it. The liver was slightly congested, the ductus venosus being still patent. The kidneys were slightly congested. The intestines generally were pale and distended with gas. The upper part of the pylorus was slightly inflamed. On feeling along the descending colon a hard substance was found, which, on being cut down upon and taken out, proved to be a piece of cork about the size of a small horse-bean. The opening was continued along the intestine, and in the transverse colon two straight pins, about an inch and a quarter in length, were discovered. The small intestine was then felt along, and near the centre two pins, bent into the shape of a hook, were found. The points were first pushed through, the heads following easily. The whole length of the small intestine was then slit up, and found to contain a small quantity of fæcal matter of a

yellowish colour, but with little or no odour. The cranium was opened at the sutures, and the brain found to be perfectly normal. No extravasation of blood into the ventricles of the brain had taken place. The blood observed in the heart, lungs, and thorax was very dark. On the discovery of the pins I sent for the policeman, who took charge of the pins, cork, and body of the child. The Procurator Fiscal was communicated with, and came here next day. In my precognition, I gave it as my opinion that from the foregoing appearances the child died from asphyxia, not the result of external violence, and that the presence of pins in the intestines, more especially of the two bent pins in the small intestine, was likely to set up a reflex irritation, leading to exhaustion and coma, the final result being asphyxia.

What I wish to know is, Was I right in arriving at this conclusion?

The sequel of the case is, to my mind, strange. The mother and grandmother were put under police supervision for a fortnight until the mother was fit for removal, the two being together in one room and the policemen in another. The accused were then taken to Dumfries Gaol, detained there nearly six weeks, then sent to Edinburgh, and three days before the day fixed for their trial were sent home. All the witnesses had been cited to appear at the Justiciary Court on the Monday, and it was not till Saturday afternoon that the citations were lifted. For my future guidance in such a case I have applied to the Procurator Fiscal, and he tells me he does not know the reason of the breakdown, and, if he did, he is not allowed to communicate it to a third party. Such an utter collapse of the case seems to me to be nothing more nor less than injustice to the accused and an inducement to infanticide, and simply means that if four pins and a piece of cork are found by a medical man at an autopsy in the presence of three witnesses, two of whom have passed the examination in pathology and the third was pathological medallist in Edinburgh University, the less he says about it the better. I ask you, Sir, and your readers to guide me in this matter, as it is not only a serious thing to the community at large that such things can go on with impunity, but also as tending to the discredit of the profession if the testimony of medical men is to be so thoroughly set at nought.

I am, Sir, your obedient servant.

JOHN WILSON,
July 6th, 1885. Medical Officer, Wanlockhead Mines.

*** We imagine the case was dropped because the authorities had reason to believe the evidence obtainable was insufficient to support a conviction. To say the least, it is strange that an infant of such tender age should be found with straight and bent pins and a piece of cork in the intestines. Such a circumstance could scarcely be the result of an accident. Illegitimacy always raises a suspicion of violence in cases of death from supposed unnatural causes; at the same time it only supplies a possible motive to crime—it by no means proves the guilt of the accused. The death was undoubtedly due to asphyxia, and this may very well have been the result of convulsions set up by the irritation in the intestines. The absence of external marks of violence, however, does not negative the hypothesis of suffocation by mishap or intent.—ED. L.

"CHOLERA MALIGNA."

To the Editor of THE LANCET.

SIR,—In your issue of the 8th inst. I observe a letter from Dr. Illingworth criticising that of "Taurus Major." Dr. Illingworth has brought forward several theoretical considerations to bear out what he considers to be the line of treatment in Asiatic cholera. He argues that because certain remedies do well in severe cases of British cholera the same remedies ought to suffice for the Asiatic disease. Dr. Illingworth must pardon me if I differ from him in this respect, also because I consider the two diseases as quite distinct from each other, though they have many clinical features in common.

Dr. Illingworth considers opium harmful in the early stages of Asiatic cholera; I have, on the contrary, seen several cases in which opium in some form or other was of immense benefit in this very stage of the disease. I admit that it is otherwise with those cases which have entered on the collapse stage; I know of no remedy which can then stay the progress of the disease, and such cases go on to a speedily fatal issue in spite of all treatment.

One example, and that in my own person, will, I hope, suffice to show Dr. Illingworth the value of treatment with opium, at least in the earlier stages of this disease. When only eight years of age I had the misfortune to be attacked with Asiatic cholera. Several remedies were tried from the very commencement of the attack for about nine hours, but without the slightest effect. Everything taken was immediately rejected. Opium was withheld all this time as being far too dangerous a remedy for so young a subject. At last, as the case was now getting desperate, it was resolved at all hazards to try its effects. I was given no less than half a grain of it with calomel, in the form of a pill. The effect was marvellous. The vomiting never recurred and the diarrhœa ceased, recovery being uninterrupted; and in a day or two I was perfectly well again.

The treatment of cholera is also in great part dietetic. No solids (except ice to suck) and no liquids (except cold water in very small quantities, a tablespoonful or even less at a time) should be given as long as vomiting and diarrhœa continue; but after these symptoms have entirely ceased for from four to six hours, a little arrowroot and brandy may then be given. Solid food should, as a rule, be withheld for a day or two at least.

I am, Sir, your obedient servant,
Brixton, Aug. 12th, 1885. GEO. CARRINGTON PURVIS.

To the Editor of THE LANCET.

SIR,—I carefully perused the letter of "Taurus Major," in your issue of July 11th, and an answer to it in your impression of 8th August. It is somewhat to be regretted that "Taurus Major" presented his communication in so condensed a form. The little time, however, at his disposal in the midst of a cholera epidemic, where he had over 400 cases, is sufficient reason for so doing. Shortly before leaving for India last autumn we were comparing notes of two epidemics, one of which my brother experienced when formerly serving in Central India; the other witnessed by myself towards the end of the summer of 1877, which produced frightful devastation throughout China and Japan. We quite agreed as to the value of sulphuric acid and opium in checking the diarrhœa at the onset—the premonitory painless diarrhœa, by which many cases are preceded. Not to be misunderstood, I would state that in an epidemic of cholera maligna it usually attacks in two different ways. (*a*) Without the slightest warning the patient drops down suddenly in a state of collapse—profound collapse. (*b*) The disease is preceded by a painless looseness of the bowels, varying from a few hours to several days, this being the more common mode of ingress. If this looseness of the bowels is not checked by some astringent or other medicine, it will as certainly lead to the early sinking and collapse of cholera maligna as the night will follow the day. It is here then, I would point out, is recommended the administration of sulphuric acid and opium, and here, I believe, the meaning has been misinterpreted. The disease not being checked *ab initio*, then to your calomel, and anything it may be the fashion of the times to add.

I cannot remember ever having noticed any direct tendency to cardiac depression. Patients exhausted by loss of blood or serious drain on that fluid truly suffer from cardiac depression, and were such a one to attempt to stand or to use any exertion, he or she would in all probability fall down in a state of syncope, perhaps even fatal; but not so in the collapsed stage of cholera. I have seen a man in this state lift a bucket nearly full of water and drink out of it without apparent harm. There is no cardiac depression here. English cholera—more commonly called Sydenham's cholera—is easily amenable to treatment, and death uncommon, at least in this country.

I have tried the salts of ammonia in cholera maligna, and found them next to useless; alcoholic stimulants to be positively injurious. Carbolic acid was freely used by the medical attendants at Nagasaki, Japan, during the epidemic before alluded to with no appreciable effect. Asiatic cholera is a disease for which no specific has as yet been discovered, hence the thousand and one drugs advertised for its cure (we are, nevertheless, on the fair way to a clearer knowledge

of the disease and its treatment, thanks to the untiring labours of Drs. Koch, Klein, and Co.); and as with travelling epidemics of cholera on their way from the East, so with it in our own country when the epidemic wave has spread over us. Let the disease be once fairly established in any individual, and little if any benefit is to be derived from our own craft. Yet here we find one recommending this, another recommending that, and so on. I must now leave my brother, at present in India, to answer more fully Dr. Illingworth's letter, as his experience of Asiatic cholera far outreaches mine, remarking in the words of the illustrious Sir Thomas Watson, "If the balance would be fairly struck, and the exact truth ascertained, I question whether we should find that the aggregate mortality from Asiatic cholera in this country was any way disturbed by our craft."

I am, Sir, yours truly,

Devonport, August 9th, 1885. M.R.C.S.E., L.R.C.P.Ed.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—It may be known to your readers, through your notices of some of my papers on Hydrophobia, that I have been engaged for some years in studying this subject, with a view to ascertain just what should be believed as to its nature and treatment. This study has led me to examine carefully every report of a case of so-called hydrophobia which has come under my notice. A considerable number of such cases appear in THE LANCET, some of them being very instructive. Some of them, however, I think are likely to be injurious in their influence upon the beliefs of medical men, unless they are subjected to a more critical analysis than their reporters furnish. An illustration of what I mean may be found in the recent report of a case from the London City Infirmary by Mr. Gem, contained in your issue for July 18th, 1885. I have not time, and you perhaps could not spare me space, to go over this report in detail; but it will, I trust, suffice for your readers that I should point out the diagnosis which, I think, the reported facts warrant, and let this be compared by them with the diagnosis of Mr. Gem and the title of the report.

The details of the report warrant, I believe, the opinion that the case was one of acute lepto-meningitis, with an accompanying pericarditis, and perhaps pneumonia, due to hard drinking, hard living, and exposure. There is, in fact, nothing in the report which differs from such phenomena as are frequently observed in cases of hard drinkers suffering from inflammation of the meninges of the brain (including the phenomena of hyperæsthesia and spitting and refusing to drink), except the pain referred particularly to the chest, which was relieved by poulticing, which pointed to inflammation of the pericardium, and the lesion of which was found at the autopsy. If stronger proof were needed as to the true nature of this case than that which is furnished by the clinical history and the results of the autopsy, it is to be found in the effect of the treatment employed. As long as this rested upon the theory that the disease was a simple inflammatory one, the report tells us, the patient's condition seemed to improve. As soon as the theory of hydrophobia took possession of Mr. Gem and he began to use opium and apomorphia, his patient got worse.

It is my conviction that such cases as this throw a great deal of light on the subject of hydrophobia, by showing how easily capable medical men are misled by their preconceived notions as to the nature and symptoms of this disorder. No matter what else may seem to be the matter with a patient, as soon as he or she protests against drinking, there begins the old and misleading routine of inquiring for a dog-bite (and any dog-bite will serve the purpose, no matter how remote it was, or how purely hypothetical may be the assumption that the dog was [not quite healthy), of testing the patient for aversion to swallowing fluids, of administering powerful doses of narcotic poisons, of increasing anxiety and horror on the part of the patient, and of adding to the despair and sense of impotency on the part of the physician, until, amid the struggles of the former and the absolute helplessness of the latter, death closes the awful scene. Have I not witnessed it? Have I not read the description of it a thousand times? And the worst of it is that a careful study of the history of this disorder, from the earliest times to the most recent, has convinced me that it is often all a dreadful mistake; that other disorders are miscalled hydrophobia, and mistreated, often to the prejudice of the patient and always to the prejudice of science. I believe the very first step to a proper notion of the nature of hydrophobia must consist in eliminating from the discussion all cases so easily referable to other disorders as this, which, on the authority of Mr. Gem and with the *quasi* sanction of your widely read journal, is assumed to be a case of hydrophobia.

I trust that Mr. Gem and you will pardon my plain speaking, for I have this matter very much at heart, and I often feel like one "crying in the wilderness," with a strong sense of loneliness and but a feeble hope that what I believe to be a true and a needed message will be heeded.

I am, Sir, very respectfully yours,

Philadelphia, Aug. 7th, 1885. CHARLES W. DULLES, M.D.

MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—I enclose a list of the subscriptions sent in answer to my appeal on behalf of the widow and her two daughters, and am thankful to say that I have already received more than the amount for which I asked, so that no further contributions are required. As usually happens in genuine cases, the worst was not told until the feelings were unlocked by the arrival of unexpected relief. These poor ladies "have often known what it is to eat dry bread for three days, and not much of that." The piano has been restored and all immediate necessities provided for; other arrangements will be made on my return to town. I trust that any inaccuracies in the list which may occur in consequence of my being away on holiday will be excused.

I remain, Sir, your obedient servant,

W. H. BROADBENT.

34, Seymour-street, Portman-square, W., August 20th, 1885.

	£	s.	d.
James Taylor, Esq., F.R.C.S.	1	1	0
Nath. P. Blaker, Esq.	1	1	0
Prof. Joseph Bell	1	0	0
Dr. Travers	0	10	0
Prof. Humphry	1	1	0
Dr. Johnson	2	2	0
W. B. Owen, Esq.	1	1	0
John Colebrook, Esq.	2	2	0
F. Lennox Brown, Esq.	2	2	0
Sir Edwin Saunders	2	0	0
Dr. Van Vestraut	1	1	0
S. Burrows, Esq.	0	10	6
Henry Smith, Esq., F.R.C.S.	3	3	0
S. Carrick Steel, Esq., F.R.C.S.	1	0	0
H. S. G. (Eastbourne)	0	10	0
Dr. Bull	1	1	0
Dr. Satchell	1	1	0
Dr. Connel	0	10	0
Ditto (for Medical Benevolent Fund)	0	10	0
Dr. Kane	1	0	0
Dr. Kealy	1	1	0
Henry Stear, Esq., F.R.C.S.	2	2	0
Dr. W. T. Mackie	0	10	0
C. E. C., M.D., P.	1	0	0
Surgeon-Major Roe	1	0	0
Dr. Tuckwell	2	2	0
Mrs. Ritchie	7	0	0
Dr. B. Jackson	1	0	0
J. S. Bartrum, Esq.	2	0	0
A. E. Cumberbatch, Esq.	5	0	0
Ditto (for Medical Benevolent Fund)	5	0	0
John Terry, Esq.	2	2	0
Dr. S. Thomson	0	10	0
Mrs. Jelly, Valencia, Spain	2	0	0
C. H. O. (Bristol)	2	0	0
Dr. Maxwell	1	0	0
A Friend from Yorkshire	1	1	0
J. F. Churchill, Esq.	1	1	0
S. G Sloman, Esq.	1	1	0
Sir William Gull	3	0	0
Dr. Atkinson	0	10	0
R. E. Burges, Esq.	0	10	6
Sir George Burrows	1	1	0
F. Le Gros Clark, Esq.	2	2	0
J. Corbett, Esq.	1	1	0
Dr. Satro (for Medical Benevolent Fund)	1	1	0
Dr. Bowles	5	0	0
A Friend per Dr. Bowles	2	0	0

CHILDBED MORTALITY IN LONDON MATERNITY HOSPITALS.

To the Editor of THE LANCET.

SIR,—It is with a feeling of much regret that I find I have annoyed Dr. Grigg by my request for an explanation of the very remarkable divergence between his statement to Dr. Priestley as to the maternal mortality at Queen Charlotte's Hospital from Feb. 14th, 1884, to July 1st, 1885, and the list of deaths published both in the annual report of that institution and also by Mr. Wynter Blyth in the Sanitary Chronicles for the parish of Marylebone during the same period. I beg to assure Dr. Grigg that I am well aware many "female infants" die in his maternity, and that I carefully endeavoured, before recklessly rushing into print, to exclude all those cases, for the total number of deaths during the above-mentioned period was fifty-nine.

Now, whilst Dr. Grigg, in his letter, would lead one to infer that his statement as to there having been only one death in 1100 consecutive cases is correct (and I sincerely trust it is), he does not distinctly deny the accuracy either of the annual report of Queen Charlotte's or of that of Mr. Wynter Blyth. In order to verify Dr. Grigg's statement I diligently searched

for the registrar of deaths' office, which he said was next door but one to Queen Charlotte's; in vain, however, for I could find no such place. And even had I succeeded, I question much whether the registrar would have permitted me to inspect his books; but that is quite immaterial, for I find from Mr. Wynter Blyth's reports (which Dr. Grigg admits are most excellent) that between the dates mentioned seven deaths occurred at Queen Charlotte's from the following causes—viz.: Parturition, 1; peritonitis, 1; kidney disease, 2; heart disease, 1; pneumonia and pleurisy, 1; bronchitis, 1.

Let me, then, ask Dr. Grigg for a direct answer to the following plain questions:—(*a*) Did those deaths just recorded occur in infants a few weeks old? (*b*) Is it not a fact that sometimes women are discharged from Queen Charlotte's Hospital before they are convalescent, only to be admitted into other public hospitals, where some of them die?

In conclusion, I would assure Dr. Grigg that my object in bringing this subject under notice was not to impugn his veracity, but to point out, in the interests of child-bearing women, that if such marvellously good results as 1 death in 1100 cases were obtained in a lying-in charity which has hitherto borne an unenviable reputation for its high death-rate, and which has three times been compelled to close its wards altogether, owing to the frightful mortality existing amongst the patients, then it is the bounden duty of the medical staff to publish, without delay, the exact details of the treatment employed to obtain such a low death-rate, in order that those details can be universally adopted.

I am, Sir, yours faithfully,

WILLIAM A. DUNCAN, M.D.

Harley-street, W., Aug. 17th, 1885.

"THE PAPER OF THE PASS EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS."

To the Editor of THE LANCET.

SIR,—May I, as a provincial practitioner, add my voice to that of my old friend Mr. Butlin in protesting against the unfairness of examining men merely for a qualification to practise in such subjects as excision of the wrist and removal of the scapula? I believe I should be overstating rather than understating the figures if I said that the performance of these operations might fall to 1 per cent. of the profession once in a lifetime. To make them a test of a man's fitness to practise his profession is absurd. To prohibit a man from practising because he cannot write down accurately all the steps of such operations is cruel. Rejection at the College means that for six months at least a man cannot enter upon practice; further, it means that for those six months he must, instead of earning money, expend money upon his dress, tuition, &c.—in fact, it amounts to a heavy pecuniary fine. Surely, then, this is a punishment that should not be inflicted unless a man shows such ignorance that it would be wrong to let him loose upon the British public as a qualified practitioner. This the public have a right to expect; but does the public expect that every practitioner should be able to put down accurately in black and white details of operations which it is a thousand chances to one he will never be called upon to perform?

Again, I think it should be remembered that operative surgery is of singularly little value to the rank and file of the profession as a means of earning a livelihood. Perhaps I have had as much operative surgery as most men of my own age in purely country practice, for I was fortunate in getting attached to a provincial hospital (thirty beds) early in life. Well, when I had done thirty-five operations I had taken precisely thirty-five guineas in fees for operations—of course the bulk were hospital cases and carried no fee,—and these were spread over some half-dozen years of practice, about enough to pay one's postage-stamps. Operative surgery is a most interesting scientific hobby for the provincial practitioner. Its pleasures and its anxieties are only known to those who practise it. As a means of earning a livelihood it probably would compare unfavourably with the sweeping of even a second-rate crossing. Millionaires and masters of fox-hounds do not get broken up in threshing machines; they do not get run over by reaping machines, or injured to any considerable extent in mills or brick-fields. And if the wealthy classes do require surgical assistance, as a rule they send for the Pagets, the Thompsons, or the Wells's of the profession, and the provincial practitioner is either left out in the cold altogether or is asked to attend to the dressings. Well, "with all its faults I love it still." But, Messieurs the Examiners, you whose fiat is of such tremendous importance to the young who would enter our ranks—you whose "yea" or "nay" may mean a way to success opened or utter ruin—for are there not some who may be unable to afford that other six months living and waiting?—be gentle with them, gentlemen, in the field of operative surgery, for it will be worth nothing at all to them pecuniarily, at the best, for many years to come.

I am, Sir, yours, &c.,

Stratford-on-Avon, Aug. 18th, 1885. HARRY LUPTON.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

NEWCASTLE INFIRMARY.

AT a late meeting of the governors of our infirmary the financial state of the institution was discussed and a gloomy picture drawn of its condition. Speaking generally, it was admitted that there was a deficit of £6500 per annum in the working of the hospital. Many causes were at work to produce this result; the principal, it must be admitted, was the commercial depression of the times and the greater cost of keeping patients, so that a remedy is not easy to find. One of the governors, in his speech on the subject, floundered very much when he alluded to the large expense incurred by the connexion with the medical college, including the not very large sum of £50 per annum for a pathologist, and he even went so far as to say that a portion of the students' fees should be diverted from the medical staff to the infirmary. It is quite evident that the institution derives great advantages from its connexion with the school in keeping a staff of lecturers well up to their work and otherwise, and there can also be no doubt that any emoluments proceeding from the teaching of students derived by the medical staff is well and honestly earned, and that it in no way impoverishes the institution. It is rather surprising that this view was not brought before the public at the same time as the governors' economics, and it does seem strange that no member of the staff spoke on the subject, but allowed such absurd statements to go forth unchallenged. The cost of keeping patients at the Newcastle Infirmary cannot be compared with many others charities in the country. Where the object desired is to treat as many as possible at a minimum expense, the effect will be to give large figures and an apparent large return for money. The infirmary receives a large proportion of skilled artisans with surgical affections, who require good keeping; and a sound rather than a quick return to their work is true economy. The working classes do not at all aid the infirmary in a proportionate manner, nor beyond Hospital Saturday has a proper and systematic appeal been made to them. This should be done in combination, as pointed out by Dr. Hume at the meeting; the abolition of the "ticket" should be carried into effect, and then the working classes will take their share in the support of our noble and free infirmary. At this meeting it was mentioned that Sir Wm. Armstrong had promised £1000 towards the expense of the new wing, conditional upon a similar sum being raised by the governors for the purpose.

SUNDERLAND INFIRMARY.

At the annual meeting of the Sunderland Infirmary held recently, it was reported that the number of in-patients treated during the past year had been 1446, as against 1482 in the previous year; 236 children had been treated in the children's ward. The number of out-patients (minor accidents) during the year has been 1314, a decrease of 351 as compared with the previous year. The daily average number of patients in the infirmary was 120·6. The average length of time of each in-patient in the house was 28·2 days, as against 31 for the previous year. There was a decrease in the income of £911. The workmen's subscriptions showed a diminution of £804. The church and chapel collections on Hospital Sunday exhibit a falling off of £77. All this is fully accounted for by the depression in trade, especially in the shipbuilding departments, which has been at a very low ebb in Sunderland.

THE VALUE OF A CHILD'S LEG.

At Stockton County Court last week a case was heard, referred from the High Court of Justice, wherein Margaret Bennett, a little girl, through her father, sued a contractor to recover compensation for injuries sustained through the negligence of one of defendant's workmen, a carter, resulting in the loss of her left leg. A verdict was given for £75 for the leg (to be invested in the Post Office Savings Bank), £3 10*s.* for money out of pocket, and costs in addition.

TYNEMOUTH.

To-day is to be marked at our "Northern Brighton" as one of much rejoicing, the corporation having set apart a portion of land for public use as a park, within the borough. This has been supplemented by a gift of eleven acres by the Duke of Northumberland, making in all a handsome park and recreation ground free for ever. The Duke is to open the park. Thus Tynemouth has another addition made to its attractions and health resources.

Newcastle-on-Tyne, Aug. 11th.

EDINBURGH.

(From our own Correspondent.)

THE LATE MR. WILLIAM WALKER.

IT will cause deep regret to many who were his old students in the eye wards of the Royal Infirmary to hear of the death of the veteran Edinburgh oculist, Mr. Walker. By his long connexion with the staff of infirmary teachers, extending over a period of thirty-three years, he had become closely identified with the clinical teaching of this school, and many noted oculists in this and other countries are indebted to him for their first lessons on the surgery of the eye. Mr. Walker was born in Dumfriesshire in 1814, but his name as a professional man has always been connected with Edinburgh, where he has lived most of his life, and where his advice as a specialist has been sought by patients from all parts of the country. He was at one time President of the Royal College of Surgeons of Edinburgh, and has been for some years oculist to Her Majesty the Queen for Scotland. Mr. Walker's most active years belonged to a period in which the fame of Edinburgh as a teaching school was greatly augmented, and he was closely connected as a colleague with the teachers of that period; whilst to the members of the younger school he has always held the relation of an honoured master, whose ripe experience assured to him the position of a mentor in all professional questions. The deceased gentleman was warmly interested in philanthropic work, and in any measures aimed at social improvements. He was gifted with ready wit and a dry vein of humour, which made him a specially valued member of the circle in which he moved; and many of his *bon mots* and jokes will be long remembered, associated with the recollection of his commanding figure, which was well known in the streets of the Scottish metropolis.

ROYAL COLLEGE OF SURGEONS.

At a meeting of the lecturers of the College held recently, Dr. George A. Gibson was elected Lecturer on Materia Medica and Therapeutics to the College. Dr. Gibson is a graduate of Edinburgh University, from which he holds the degrees of M.D. and D.Sc. He is also a Fellow of the Royal Society and of the College of Physicians of Edinburgh. He was formerly assistant-physician to the Birmingham General Hospital, and a lecturer on Medical Diagnosis in the Edinburgh Medical School. For some years he has been one of the medical tutors in the Edinburgh Royal Infirmary. He is the author of numerous articles on medical and biological topics, chiefly on questions connected with the physiology and pathology of the circulatory system, and with diseases of the chest. In the domain of the physical sciences he has done valuable work in investigating the geological formations found in some of the northern regions of this country.

HEALTH OF EDINBURGH.

Dr. Littlejohn's weekly bill of health for the city shows a mortality of 84, giving a death-rate of 17 per 1000, which is about the average for this city, although it is a little higher than that registered here during the last few weeks. Of 47 cases of zymotic diseases intimated to the authorities under the provisions of the Police Act, 17 were cases of fever, 6 of diphtheria, 8 of scarlatina, and 16 of measles; and of these cases 6 proved fatal,—viz., those reported as diphtheria. During the week there have been 9 fatal cases of diarrhœa. Of a total of 123 births registered, 9 were illegitimate.

IRELAND.

(From our own Correspondent.)

A CASE of sporadic cholera of an aggravated character occurred at Dungannon on the 11th inst., and terminated fatally after twelve hours' illness. The facts of the case are as follows:—The patient, a strong, healthy man aged thirty-five, a flax-dresser, returned about a week previous to his attack from England, where he had been working at his trade. As his friends did not attach much importance to his illness, no medical advice was obtained for some hours; but Dr. Browne, medical officer of health, saw him about three hours before death, when he was in a state of collapse and presented all the symptoms of a severe form of cholera. Dr. Browne regarded the case as one of sporadic cholera of a very aggravated type. All the necessary sanitary precautions were taken as if the case were one of an infective character, and it is satisfactory to find that a similar attack has not taken place in the locality.

LOCAL GOVERNMENT BOARD FOR IRELAND.

In the last annual report attention was drawn to the fact that the returns for the year ended February, 1884, showed a decrease in the average daily number of persons relieved in the workhouses as compared with the number so relieved in the preceding year, but that there had been an increase in the number of persons who received out-door relief. The returns for the year just ended show a still further decline in the number of persons relieved in the workhouses, whilst there is also a considerable diminution in the average daily number of persons who received out-door relief, as compared with either of the preceding four years. During the twelve months ending on the 17th of January last the total number of deaths in the workhouses amounted to 11,238, being a decrease of 1167 as compared with the previous return. Deaths by fever were 510, as against 594; by lung disease, 1929, as against 2213; and deaths by small-pox, 1, as against 11 in the previous year. As regards the number of cases in which medical relief was afforded under the Medical Charities Act, it appears that there was a decrease of 17,312, including those prescribed for at dispensaries and attended at their own homes, as compared with the year preceding. During the year ended September 30th, 1884, there were 102,548 persons vaccinated, being a decrease of 3523 as compared with 1883. The total expenditure of poor-rates for poor relief, medical relief, burial-grounds, sanitary measures, superannuation, &c., was in 1884 £1,286,735, being a decrease of £40,228 as contrasted with 1883. The sanitary expenditure for the year was £58,844.

NORTH DUBLIN UNION.

The guardians last week appointed a medical officer to Cabra Auxiliary. There were two candidates—Drs. Maguire and Kenny—for the post, both being medical officers of the union. A letter was received from Dr. Maguire offering to perform the duties at £50 per annum, but notwithstanding this the guardians appointed Dr. Kenny at an annual salary of £75. The choice of the guardians may no doubt be accounted for on political and religious grounds. Dr. Maguire is a Protestant, and Dr. Kenny a Roman Catholic, who has identified himself with the Land League agitation.

Dr. Charles F. Knight was a candidate for a seat on the Senate of the Royal University of Ireland at the meeting of Convocation held last week; but as a sufficient number were not present, the election has been postponed to Oct. 18th.

Dublin, August 18th.

INVENTIONS EXHIBITION. — Messrs. Wm. Woollams and Co., of High-street, near Manchester-square, W., the original makers of non-arsenical paper-hangings, have been awarded a bronze medal at the Inventions Exhibition for specimens of "embossed leather" and "tergorine," lacquered and decorated, for scenes, wall-hangings, &c.

PARIS.

(From our Paris Correspondent.)

THE CHOLERA EPIDEMIC.

ACCORDING to Dr. ROUX, hospital physician and member of the Council of Hygiene of Marseilles, the cholera now raging in that city broke out about the 25th of June last. He does not, however, consider it a new invasion, or rather a new importation, but that the disease was the result of the revivification of the cholera germs that were left behind last year. He remarked that although the disease gradually extended to several quarters of the city, yet no direct communication as cause and effect could be traced between them. It cannot as yet be considered an epidemic, as the number of cases, which were at first insignificant, amounted at the end of July to twelve, and since the commencement of August to twenty-five, daily. Another physician writing on the same subject states that from his personal observations the number of cures is very considerable, that the fatal cases, in general, followed a much more rapid course than those of last year, and that the patients succumbed in the stage of asphyxia. According to the latest report from Marseilles, it cannot be denied that the disease is extending, but it is doing so in such a sluggish manner that the medical authorities of Marseilles have reason to think that, even if it assumed the character of an epidemic, the proportions will by no means be equal to those of last year. From Tonquin it has been officially reported that cholera has broken out in that country, that on the 17th inst. there were sixty-six cases under treatment, among whom were several *infirmiers*, or men nurses.

At the meeting of the Academy of Medicine on Tuesday last, Dr. Brouardel read an account of his visit to Marseilles in his capacity of President of the Council of Hygiene of Paris, which of course provoked some discussion; but this was soon cut short, as Dr. Brouardel begged that the theoretical parts of the subject of cholera might be set aside for the present, as no time was to be lost in attending to the practical aspects of the question. According to Dr. Brouardel's report there seems no doubt that the disease now prevailing in Marseilles is true Asiatic cholera, the origin of which, however, is due, not to importation, but to the insanitary condition of the town, the extent of which is simply indescribable. M. Jules Guérin saw in this assertion the confirmation of the ideas he has been entertaining for more than fifty years. He renewed his argument that cholera was engendered by local causes, and that before the ostensible outbreak of an epidemic the latter is preceded by certain prodromic conditions, which in fact constitute a part of the disease. He does not admit the existence of the two forms of cholera now so generally accepted in practice—viz., the sporadic or false cholera and the Asiatic or true cholera; he, however, quite approved of the sanitary measures recommended by the Council of Hygiene, as being the only effectual means of keeping away all causes of infection.

At the Congress of the Association Française for the Advancement of Science, which was held last week at Grenoble, it was unanimously resolved that the meeting should deliberate on the subject of sanitary measures concerning the cholera, and a declaration was made to the effect that quarantines by land, "cordons sanitaires," and fumigations were measures not only useless but dangerous. The cholera must be arrested at its entrance by the Red Sea. The Congress, moreover, declared that the improvement of the sanitary conditions in cities by the strict observance of cleanliness was the only efficacious means of preventing the extension of the plague. Thus it may be seen that foreigners are gradually veering round to the English ideas of the nature and prophylaxis of cholera, after having most unceremoniously abused them.

ACCIDENT TO DR. RECORD.

An accident happened to Dr. Record on Sunday last at the races at Deauville. He was driving with two ladies in a pony-chaise. The vehicle was overturned and the Doctor's leg got severely jammed. It is, however, anticipated that the accident will not be followed by any bad results.

Paris, August 18th.

Medical News.

SOCIETY OF APOTHECARIES.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on the 13th inst.:—

Tebb, William Scott, M.R.C.S., Albert-road, Regent's-park.

On the same day the following gentlemen passed their examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received certificates to practise:—

Hill, Alfred W., Adelaide, South Australia.
Pugh, John Williamson, Llannon, Cardiganshire.

Mr. John Walter Carr, L.S.A., of University College Hospital, has been elected to the Medical Scholarship of the Society of Apothecaries, of the annual value of £100. The examiners, John Syer Bristowe, M.D., and Lionel Smith Beale, M.B., report that Mr. James Harry Ernest Brock, L.S.A., of University College Hospital, obtained a number of marks nearly equal to those of the successful candidate.

ON the 16th inst. the seventh annual Church Parade and Friendly Societies' Demonstration on behalf of the Shadwell Hospital was held.

THE Dumville Surgical Prize at the Manchester Royal Infirmary, of the value of £20, has been awarded, after examination, to Mr. C. F. Seville, of Scout House, Mossley, a student at the Owens College.

VACCINATION GRANTS.—Mr. W. D. Jefferson, of the No. 1 district of the Ripon Union (second time), and Mr. Chas. Ashenden, M.R.C.S., medical officer and public vaccinator of the 1st district and workhouse of the Hastings Union (seventh time), have received the Government grant for efficient vaccination.

OVER-PRESSURE IN SCHOOLS.—A petition recently presented to Parliament by the National Union of Elementary Teachers, representing an aggregate of 12,890 members, prays that an address may be presented to Her Majesty to appoint an impartial commission to inquire into the educational, medical, and administrative aspects of the system now adopted for the payment of grants to elementary schools.

POISONING BY WILD HONEY.—"Gaillard's Journal" reports that at Branchville, S.C., on June 5th a large number of persons, three of whom died, were poisoned by eating wild honey. Shortly after taking it they all complained of blindness and dizziness, and the honey was found on examination to be strongly impregnated with gelsemium. But for prompt and energetic medical assistance, it is said there would have been twenty deaths, instead of three. A few days before there occurred two deaths in the neighbourhood which could not be satisfactorily accounted for, but which are now believed to have been undoubtedly due to the same cause.

UNIVERSITY OF LONDON.—At the recent examination for Honours in connexion with the Intermediate Science and Preliminary Scientific (M.B.) Conjoint Examination, four candidates obtained a first class, eight a second class, and two a third class in inorganic chemistry. In experimental physics one name appears in the first class, two in the second, and two in the third. In botany one candidate obtained a first class, four a second, and two a third class. In zoology two passed with first class, three with second class, and one with third class Honours. In the Preliminary Scientific (M.B.) Examination thirty-five candidates were placed in the first division, and sixty-nine in the second. Four Honours candidates were recommended for a pass. Fourteen passed in two subjects of the examination, and thirteen in one subject.

THE STATE OF THE THAMES.—On the 19th inst. an influential and enthusiastic meeting was held at Erith for the purpose of considering (1) the alarmingly offensive and pestilential condition of the Thames; (2) the prejudicial effect of this upon Erith and the neighbourhood; (3) the expensive and ineffectual action of the Metropolitan Board of Works. Resolutions were adopted declaring that the existing method of dealing with the sewage is a great financial injustice to the ratepayers, a disgrace to the

sanitary knowledge of the age, injurious in the first degree to public health, and contrary to the enactments of the Act of Parliament 21 and 22 Victoria; and that the Metropolitan Board of Works should be urged to undertake the treatment by the A B C process of the entire sewage of the metropolis, unless they are prepared to immediately propound a scheme for effectively dealing with the sewage of the metropolis in accordance with the recommendation of Her Majesty's Royal Commission on Metropolitan Sewage Discharge.

THE ADULTERATION ACT.—A milk-seller of Sussex-road, Brixton, has been summoned, at the instance of Inspector Baxter for the Lambeth Vestry, for selling milk which was shown by analysis to contain 28 per cent. of water. The defendant admitted he had added a quart of water to every ten quarts of milk. He was fined 20*s.* and 12*s.* 6*d.* costs. A milk-seller and cow-keeper, also of Sussex-road, was likewise summoned for selling milk found to be adulterated with water to the extent of 23 per cent. The defendant said he could not account for it. Inspector Baxter said the defendant kept cows and likewise bought milk. A penalty of 40*s.* and 12*s.* 6*d.* costs was imposed.

ST. JOHN AMBULANCE ASSOCIATION.—On the 15th inst. Princess Christian distributed over 500 certificates and medallions to the successful candidates at the sessional examinations recently held in the City and Port of London district of this association. This centre has now been formed six years, and during this time 3011 men and 1143 women had received instruction, of which number 1741 of the former, and 950 of the latter, had qualified for certificates. During the session which has just ended, thirty-eight classes have been held in this district, at which 800 men and women attended, with the result that 500 of them obtained certificates. On the 17th inst., previous to the Royal yacht *Osborne* leaving Cowes, the Princess of Wales distributed medallions and certificates to the officers and men of the yacht who had successfully passed the required examinations.

HOUSING OF THE WORKING CLASSES.—The third report of Her Majesty's Commissioners for Inquiring into the Housing of the Working Classes, which was issued on the 13th inst., relates to Ireland. The general effect of the evidence given before the Commission points to several facts—that the poverty of the labouring classes in most of the towns of Ireland is extreme; that nothing could be more miserable than the condition of many of their dwellings and surroundings in the towns; that, notwithstanding the adverse influences of their existence, their standard of morality is very high; and that the existing evils of administration are not due to defects in, but to the failure of, the existing authorities in acting upon the legislative powers invested in them. Generally speaking, the Commissioners advise that all recommendations that have been made for England should also apply to Ireland, and the report concludes with a recommendation for the improvement of local government in that country.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ANDERSON, J. WALLACE, M.D., C.M.Glas., F.F.P.S., has been appointed Visiting Physician to the Glasgow Royal Infirmary, vice Scott Orr, whose term of office expires.

BERESFORD, CHARLES W., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Flamstead District of the Hemel Hempstead Union, vice Bernard, deceased.

BLAKISTON, AUBREY, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Wareham First and Morden Districts of the Wareham and Purbeck Union, vice Webster, resigned.

CHETHAM-STRODE, REGINALD, M.B. & C.M.Ed., has been appointed House-Surgeon to the County Hospital, Huntingdon.

CLARKE, CHARLES FRED., M.R.C.S., L.S.A.Lond. (of Plumstead), has been appointed Honorary Surgeon to the East Plumstead District of the Royal Kent Dispensary.

COLLINS, GEORGE F., M.R.C.S., L.K.Q.C.P.I., L.M., has been appointed Junior Assistant Medical Officer to the Hants County Asylum, Knowle, Fareham, vice Barker, resigned.

COOK, HENRY SAMUEL, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse, Parish of Birmingham, vice Dendy, resigned.

FLEMING, WILLIAM JAMES, M.D., C.M.Glas., F.F.P.S., has been appointed Visiting Surgeon to the Glasgow Royal Infirmary, vice Eben. Watson, whose term of office expires.

GILMORE, RICHARD WHATELEY, M.B.Dub., L.R.C.S.I., has been appointed Medical Officer for the Broughton District of the Glanford Brigg Union, vice Titley, resigned.

HINDLE, JAMES, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Rillington District of the Malton Union, vice Lyon, resigned.

MATTHEY, ARTHUR, M.R.C.S., L.R.C.P. (late Junior House-Surgeon, Royal South Hants Infirmary), has been appointed House-Surgeon to the Croydon General Hospital.

MOORE, EDW. HEAD, L.R.C.P.Ed., L.S.A.Lond., has been appointed Medical Officer for the Mylor District of the Falmouth Union, vice Greenwood, resigned.

SMITH, GEORGE COCKBURN, L.R.C.P.Ed., L.R.C.S.Ed., M.R.C.S., has been appointed Medical Officer for the Middleton Cheney District of the Banbury Union, vice Lawson, resigned.

TAIT, LAWSON, F.R.C.S.Eng., F.R.C.S.Ed., has been appointed Consulting Surgeon to the Samaritan Hospital for Women at Nottingham.

THYNE, THOMAS, M.D.Ed., F.R.C.S.Eng., has been appointed Medical Officer for the Millcorner and Cockfoster's District of the Edmonton Union, vice Livingston, deceased.

WEBB, THOMAS LAW, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer to the Workhouse, Madeley Union, vice Procter, resigned.

Births, Marriages, and Deaths.

BIRTHS.

CLAREMONT.—On the 12th inst., at Spring Vale, Green-road, Southsea, the wife of Claude C. Clermont, M.B., B.S., of a son.

DEANE.—On the 19th inst., at 1, Craven-gardens, Uxbridge-road, Ealing, W., the wife of John Deane, L.R.C.P.Ed., M.R.C.S.Eng., of a daughter.

DEVIS.—On the 16th June, at Sydney, N.S.W., the wife of Chas. J. Devis, M.R.C.S.Eng., &c., of a daughter.

HERRON.—On the 9th inst., at Southwark-bridge-road, the wife of J. Herron, M.D., of a son.

REID.—On the 11th inst., at Bridge-avenue, Hammersmith, London, the wife of John Reid, M.D., of a daughter.

SAUNDERS.—On the 9th inst., at Denburn, Crail, Fife, the wife of Dr. F. A. Saunders, F.R.C.S., &c., of a daughter.

WHITEHEAD.—On the 13th inst., at Brookside House, Manchester, the wife of Walter Whitehead, F.R.C.S., F.R.S.E., of a daughter.

MARRIAGES.

MACKENZIE—PENTLAND.—On the 14th inst., at Muirville, Newhaven-road, Leith, by the Rev. John A. Murray, minister of the U.P. Church, Kirriemuir, Colin Mackenzie, M.B., C.M., Tain, to Isa, second daughter of Young Pentland, Esq., Leith.

PRING—CROMPTON.—On the 18th inst., at Bayswater, W., Frederick Arthur Pring, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A.Lond., eldest son of Walter Pring, Esq., of Exeter, to Isabel, eldest daughter of Francis Crompton, Esq., of Matford House, Devon.

RICHARDS—LAW.—On the 13th inst., at Birstall Parish Church, by the Rev. John Kemp, M.A., Vicar, John Ellison Richards, L.R.C.P., L.R.C.S., of Huddersfield, to Annie, only daughter of Joseph Law, Esq., of Green Mount Villa, Cleckheaton.

SAUNDERS—BERRY.—On the 18th inst., at Holy Trinity Church, Milton-next-Gravesend, Jas. Frederick, M.R.C.S., L.S.A.Lond., of Newport House, Catford, S.E., son of Robert P. Saunders, late Chief Constructor H.M. Dockyard, Chatham, to Mary Jane, eldest daughter of George Berry, Chief Constable, Gravesend.

WILLIAMS—HALL.—On the 12th inst., at St. Mark's, Surbiton, E. Lloyd Williams, M.R.C.S., L.R.C.P.Lond., of James-street, Buckingham-gate, London, to Edith Eva, daughter of the late Samuel Reginald Hall, of Adelaide, Australia.

WRIGHT—HOY.—On the 20th June, at Christ Church, Jubbulpore, India, Robert Temple Wright, Surgeon-Major, B.M.S., to Isabella, daughter of the late Robert Hoy, Esq.

DEATHS.

ADAMS.—On the 11th inst., at High-street, Lymington, Hants, Robert Seymour Adams, M.R.C.S.Eng., L.S.A.Lond., aged 52.

BECKINGSALE.—On the 10th inst., at Newport, Isle of Wight, after a brief illness, John Edgar Beckingsale, F.R.C.S., J.P., aged 75. Friends will please accept this intimation.

GOODACRE.—On the 14th inst., the Rev. Francis Burges Goodacre, M.D., Rector of Wilby and Hargham, Norfolk.

NASH.—On the 17th inst., at his residence, Portsdown-road, Maida-vale, London, John Pearson Nash, M.D., Surgeon-Major of H.M. Madras Army (Retired), in his 87th year.

TURNOUR.—On the 30th June, at Perth, West Australia, Charles Chad Turnour, M.D., aged 33.

WALKER.—On the 16th inst., at 47, Northumberland-street, Edinburgh, William Walker, F.R.C.S., Surgeon Oculist to the Queen in Scotland, aged 71. Friends will kindly accept this (the only) intimation.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Aug. 20th, 1885.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 14	30·34	N.W.	55	50	101	70	48	...	Overcast
,, 15	30·33	W.	59	54	96	73	51	...	Hazy
,, 16	30·34	S.W.	63	58	107	79	56	...	Bright
,, 17	30·23	W.	63	56	116	79	56	...	Hazy
,, 18	30·11	N.E.	60	57	81	65	57	...	Overcast
,, 19	30·11	N.W.	54	50	79	62	50	...	Overcast
,, 20	29·93	N.	56	53	...	...	53	...	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

KASHMIR MEDICAL MISSION.

IN the Report of the Kashmir Medical Mission for 1884, which has just reached us, Mr. Neve gives a detailed classification of his operations, amounting to 282 major and 674 minor, out of which number only six patients died—a result which speaks well for the care and skill of the operator, as also for the power of the Kashmiri constitution to bear surgical interference. Stone being far less common there than in many other parts of India, only three lithotomies were performed. Eye diseases, as usual in India, claimed a good deal of attention, thirty-seven operations for cataract having been performed; of these, twenty-seven are reported as cured, and five as improved. Nerve-stretching for leprosy was resorted to thirty-two times with invariable success. There seems to have been some diminution in the form of disease which may be said to be peculiar to Kashmir—viz., epithelioma of the surface of the abdomen and thighs due to the habit of the natives of carrying about, often under their clothes, a vessel of heated embers. This has been described in our columns by Dr. T. Maxwell (1879), and numbers of cases were operated on by him and by Drs. Elmslie and Downes, who were at different times in charge of the mission. Mr. Neve, however, only records twelve such operations. The Maharajah has shown his appreciation of the work done for his subjects by giving substantial help in repairing and adding to the Mission Hospital.

Holdrich.—The inquest certainly seems to have been arranged in a somewhat irregular manner. We have always advocated that where the cause of death is not obvious a post-mortem examination should be made.

Mr. Voss Solomon shall receive a proof at an early date.

SMALL-POX AND FEVER HOSPITALS.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me through the medium of your journal to ask the opinion of those conversant with the subject whether it is advisable from a sanitary point of view for one medical man to have charge of two separate hospitals, one for small-pox and the other for fever. In my own town we have a borough hospital for small-pox and also a fever hospital (which has just been handed over to the Corporation), the sanitary committee of which have decided to recommend the Corporation to employ one medical man for both hospitals, instead of two as formerly. This, as a member of the sanitary committee, I have strongly opposed; but as I am informed that it is done in other towns, I should be glad if any of your readers having charge of such joint hospitals would kindly give me their opinion upon the subject.

I am, Sir, yours faithfully,

Leeds, Aug. 18th, 1885. J. S. LOE.

WORKHOUSE DIETARIES.

DR. J. MILSON RHODES, Vice-Chairman of the House Committee of the Chorlton Board of Guardians, has recently published an interesting pamphlet on workhouse dietaries, which, it is to be hoped, will fix attention upon the extraordinary variations in the food provided for the poor who have to be maintained at the cost of the ratepayers. The fact that in the Manchester Union paupers have three flesh meat dinners per week whilst those in the Chorlton Union have four led Dr. Rhodes, after an unavailing application to the Local Government Board, to investigate the matter. The result is worthy of notice. At breakfast the quantity of porridge given at Toxteth Park is double that given at St. Pancras. The allowance of bread varies from 49 oz. to 35 oz. weekly. Porridge and milk is a favourite breakfast allowance all over the country; but the Oldham pauper gets 100 per cent. more than his unlucky brother at Tynemouth. There is a similar want of uniformity as to dinners. At Tynemouth exactly twice as much meat is given per week as at Rochdale, the quantity of potatoes and bread remaining the same. There is a difference of 100 per cent. in meat and of 25 per cent. in the potatoes between Stapleton and Birmingham. It further appears that the Chorlton Union is the only one where there are four meat dinners allowed. Suet pudding is given in nearly all the workhouses; but Dr. Rhodes finds that at Newcastle they give 14 oz. of it, and at Ashton 24 oz. At Nottingham 1½ lb. of potato hash is allowed without any bread; at Manchester 2 lb. of hash are given and 4 oz. of bread. The above are merely examples. All over the country, and in almost every article that finds a place on the dietary sheet, there is a surprising and disgraceful want of uniformity. There are ample data for the construction of a really scientific and satisfactory dietary; but those now adopted in our workhouses appear to be purely empirical, and to have no basis of reason. The subject is one eminently suited for discussion at the next Conference of Poor-law Guardians, and pressure should be brought upon the Local Government Board to consider this question of diet tables—a question which will some time or other, and the sooner the better, have to be faced, however unpleasant and unpopular the task may be.

Mr. Jas. Wheeler will see in our present number an article on the subject of his letter.

ANTISEPSIS IN MIDWIFERY.

To the Editor of THE LANCET.

SIR,—In the course of the last few weeks I see there has been some discussion on the above subject, and in particular the opinion has been expressed that "irrigation should be retained as part of the recognised treatment."

With respect to the value of truly antiseptic and aseptic irrigation there can hardly be two opinions; but I am inclined to think that asepticity is not always obtained. The fault, I consider, lies in the instrument, which, as usually constructed, is directly opposed to the fundamental canons of antiseptic surgery. As purchased the apparatus consists of the usual rubber tube and ball, with two nozzles, one of rubber or gum elastic, for vaginal purposes; the other—*horribile dictu!*—of coarse-fibred bone for rectal use, and deliberately intended to be thrust into the vaginal nozzle. A more perfect method of ensuring the entrance of putrefactive germs into the vagina and uterus can scarcely be conceived. Let anyone who doubts this take the trouble, after using the rectal nozzle and washing it with carbolic acid solution, to scrape it, and put some of the scrapings into sterilised meat infusion. I venture to think he will be astonished at the result. In some continental lying-in hospitals the rule is that each woman shall have her own glass vaginal nozzle always standing by the bedside in an antiseptic solution, and the tube of a syphon is attached to this nozzle when irrigation is to be performed. These glass nozzles are never used for more than one patient. Perhaps this precaution is excessive; but, at any rate, I consider that the practitioner's midwifery bag should contain an irrigator of some sort, with a nozzle for vaginal purposes alone, and that no instrument used for enemata should be employed in so important an operation as the washing out of the uterus, even if the nozzles be attached by a screw, for the worm of the screw is itself a harbour for dirt and septic matter of all sorts. In my opinion, the best instrument is one made in one piece, with a vulcanite or glass nozzle, which is never taken off.

I am, Sir, yours faithfully,

Aug. 17th, 1885. M.B.

MYOPIA AS A DISQUALIFICATION FOR THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—I should feel obliged if anyone can tell me why they are so particular about myopia in the physical examination of candidates for the Naval Medical Service. In both the Army and Indian Medical Services I understand that myopia is no disqualification. On the day I was examined about eleven candidates underwent examination, and I believe that two besides myself were rejected in myopia. This shuts out a large proportion of medical students from the Naval Medical Service. According to your issue of Aug. 15th, there were only twenty-two candidates for sixteen vacancies. Might not this explain the dearth of candidates for this Service compared with the Army Medical and Indian Medical Services? I am, Sir, yours obediently,

Aug. 17th, 1885. AN UNSUCCESSFUL CANDIDATE.

EXAMINATION IN PHYSIOLOGY AND HISTOLOGY AT THE UNIVERSITY OF LONDON.

To the Editor of THE LANCET.

SIR,—Will you allow me through the medium of your columns to call the attention of the Senate of the University of London to a most unpardonable neglect of duty on the part of their examiners in Physiology and Histology in having failed to hold *viva voce* examinations in the cases of doubtful candidates before finally rejecting them? The Calendar distinctly states that *viva voce* interrogation shall take place, and it is to be presumed that this was intended to further test the merits of doubtful candidates. I feel that a great injustice has been done to me on account of this neglect, as I have every reason to believe that I have been rejected solely on account of defective eyesight, and not on account of ignorance due to want of proper application. From boyhood my eyes have been weak, for which I have had to use convex glasses, and now ten to fifteen minutes with the microscope are enough to produce complete weariness with spasm of the ciliary muscle. I further am troubled with the defect of astigmatism, and it is impossible for me, except under favourable conditions, to detect the fine striation of certain microscopic tissues necessary to their identification; and such favourable conditions are not likely to occur when one is forbidden to touch anything but the fine adjustment of the microscopes. The course adopted by Drs. Gamgee and Yeo contrasts most unfavourably with the exceedingly conscientious pains taken by the examiners in Anatomy, of which I was a witness, one man being given as much as from forty to sixty minutes' *viva voce* examination by all three of the examiners, in order that his knowledge might be amply tested, and the result is that he has passed in the first division. I feel sure that if the examiners in Physiology and Histology had only treated me as conscientiously as was their bounden duty, I should not have been subjected to the humiliation of rejection, which, in spite of the words of the circular issued to rejected candidates that "the *whole* of the candidate's work has been taken into consideration," I am fully persuaded, was in my case, and perhaps in that of others, due only to a *part*. Had they only taken the trouble to examine me personally, I could have explained the defect in my sight, and allowances should have been made for it.

As I probably am not the only victim of the perfunctoriness of the two examiners in question, I trust you will think the matter of sufficient importance to merit insertion in your valuable and influential journal. To write to the Registrar of the University, with the request to lay my complaint before the Senate, would only provoke the polite reply that it did not come within his duties to do so, and would further disclose my identity, which I naturally wish to conceal. To be disgraced and sent into moral penal servitude for a year through a defect over which one has no control is a very serious matter to those who have no time to waste; and, surely, it can never have been intended that the practical histological examination should have for its object the detection and elimination of those with defective eyesight.—Yours obediently,

Aug. 8th, 1885. REJECTED.

*** We think our correspondent has fair ground of complaint, providing, of course, that the reason assigned by him for his rejection is the true one. There are, however, two sides to every story of this kind, and we should like to have heard the examiners' story. We are strongly inclined to believe that if our correspondent had stated his defect to his examiners when he found he was unable to recognise the specimens submitted to him for identification and description he would have been admitted to a *viva voce* examination. Taking a wider view, it might be asked, Is a man whose vision is seriously defective fitted for a profession which requires acute sight? How can he recognise a small artery, perform an iridectomy, or close a cleft palate, or diagnose a pustule of variola, if he be unable to recognise muscular or nerve structure under the microscope?—ED. L.

THE BRADLEY FUND.

To the Editor of THE LANCET.

SIR,—I have received the following additional subscriptions towards the above fund.

Will you kindly correct two mistakes in the list which appeared in your issue of Aug. 15th? Dr. Balthazar Foster's subscription should have been £2 2s., and Dr. Francis McLaughlin should have been Dr. *Thomas* McLaughlin. I remain, Sir, yours faithfully,

Chesterfield, Aug. 19th, 1885. RICHARD JEFFREYS.

Mr. Eric Erichsen ...	...	£5	5	0	Dr. Robertson Mutch	...	£1	1	0
Dr. Dyson	...	2	2	0	Dr. Samuel Mitchell	...	1	1	0
Dr. Wm. Richardson	...	2	2	0	Dr. G. P. Hadley ...	...	1	1	0
Mr. C. N. Macnamara	...	2	2	0	Dr. Johnston ...	...	1	1	0
Dr. Clifford Allbutt	...	2	2	0	Mr. Henry Steare ...	...	1	0	0
Mr. John Hall ...	...	2	2	0	Mr. John Baines ...	...	1	0	0
Dr. Van Vestraut ...	...	1	1	0	Dr. W. H. Higgins	...	1	0	0
Dr. Martin	...	1	1	0	Mr. Henry Heywood	...	1	0	0
Mr. J. F. F. Parr ...	...	1	1	0	Mr. W. H. Booth ...	...	0	10	6
Dr. R. E. Burgess ...	...	1	1	0	Mr. Wm. Dale James	...	0	10	6
Mr. J. F. Churchill	...	1	1	0	Dr. Henry Denne ...	...	0	10	0
Mr. Matthew Leach	...	1	1	0	Mr. W. Maxwell Burman		0	10	0
Dr. J. Swain Scriven	...	1	1	0					

A. T. H.—Our correspondent's case must be a rare one. He would be quite justified in stating the facts to the Medical Council, and making an application for favourable consideration under the clause mentioned.

Mr. G. Martin.—We have not at hand a copy of the papers.

LUNACY CERTIFICATES.

To the Editor of THE LANCET.

SIR,—The wave of popular excitement that has passed over us, culminating in legal proceedings against all and sundry who have been concerned in filling up certificates of lunacy, has just taken a new departure. Thus we find from the columns of your daily contemporaries of the 14th inst. that the Commissioners in Lunacy have thought fit to arraign Mr. Sayer of Ampthill-square, District Medical Officer of St. Pancras, before Mr. Cook, at the Marylebone Police-court, for having, as alleged, falsely certified that he had examined one John Carmichael in St. Pancras Workhouse, when, in fact, Carmichael was not an inmate of the said workhouse (though, as we have learned, he was so shortly after), but was at the time of such certification residing at No. 3, Euston-square. Having been applied to by Mr. Sayer for my advice as to what he should do under the circumstances, I trust you will permit me to tell the story, and, in the interests of others, to draw a moral therefrom.

In the middle of March, 1884, an order was sent by the relieving officer of the district to visit John Carmichael, residing at No. 3, Euston-square. On examining the man, Mr. Sayer found him to be a dangerous lunatic; subsequently the relieving officer brought to Mr. Sayer a printed form of certification, which contained, where there should have been a blank, the words "St. Pancras Workhouse," printed in red. Mr. Sayer filled in the form, stating that he had examined the man at No. 3, Euston-square, but omitted to run his pen through the printed words referred to. The certificate having been counter-signed by a Justice, the man was taken to an asylum; but neither there nor at the office of the Commissioners in Lunacy was any informality noticed—in fact, it was not until the man was discharged cured that it was discovered, and then not until the man had applied for and received from the Commissioners a copy of the certificate, when, finding that Mr. Sayer had made an error, he wrote to that gentleman and demanded compensation for, as he alleged, illegal incarceration. Foiled in this, he got the Commissioners in Lunacy to move in the matter, and that body—altogether ignoring the fact that if the official whose duty it was to examine all lunacy certificates had done such duty he would have discovered eighteen months ago on the face of the document that an absolutely impossible feat had been attempted (that of seeing the same man in two different places at the same time), and, having noticed that it must be a clerical error, would have afforded Mr. Sayer the opportunity of correcting it—feeling the chance was not to be thrown away of proving to the public what a zealous body of conscientious gentlemen these Commissioners are, had a summons taken out, and Mr. Sayer was dragged to a police-court, and would have been committed for trial had it not happened that the magistrate before whom he was brought had the good sense to discover, and the generosity to state, that Mr. Sayer "had not made the omission wilfully." If such committal had been made, it would have been to the utter discredit of the Commissioners and to the disgust of all rightly-constituted minds. After this expression of opinion from the Bench, the counsel for the prosecution withdrew the summons, which, in my judgment—and I am not alone—ought never in such a ludicrous case to have been applied for.

But enough. I trust that those of your readers who may chance to read this story will note that not only have we everything to fear from the deluded and ignorant public in all matters relating to lunatics, but that the Commissioners in Lunacy, who should protect us, are prepared to worry, harass, and to put medical men to a cruel outlay if through inadvertence any of them commit a clerical error. I hold that the Commission itself is not so strong as to be able thus to affront the medical profession with impunity.

I am, Sir, yours obediently,

JOS. ROGERS,
Chairman Poor-Law Medical Officers' Association.

Montague-place, W.C., Aug. 15th, 1885.

*** We think our correspondent is unreasonable. The Commissioners *must* do something. As it is clearly impracticable that they should discharge their own proper duties, they must needs prosecute somebody; and if there be no real wrong-doing, petty clerical errors must be treated as crimes.—ED. L.

New Zealand.—We find on inquiry that some gentlemen have been selected out of a large number of applicants for the posts in New Zealand to which our correspondent refers.

A Constant Subscriber.—We are not acquainted with the system, and therefore cannot speak of its merits or demerits.

Mr. Chas. Lakin.—We do not know of an institution of the kind where the charge would be low enough for the probable means of an artisan. Our correspondent might consult the Charities' Register, published by Longmans.

FIBROID LUNG.

To the Editor of THE LANCET.

SIR,—I think "Medical Sufferer" will find Bonjean's ergotine of some service in the above condition. At this infirmary we use a large quantity of ergotine in the treatment of fibroid lung. We usually prescribe a draught containing four or six grains of ergotine, or give two grains hypodermically at bedtime. We find this treatment ensures a good night's rest, with little or no cough, and expectoration somewhat lessened. It is necessary to use Bonjean's ergotine only, as all other preparations of ergot or ergotine are of no use whatever in the treatment of the troublesome cough arising from the disease.—Yours truly,

Union Infirmary, Leeds, Aug. 17th, 1885. ARTHUR HAWKYARD.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Broadbent, London; Dr. Buchanan, Glasgow; Mr. C. Higgens, London; Mr. R. James; Mr. C. E. Monro, Newtown, Mon.; Dr. Jos. Rogers, London; Dr. Thurstan, Southborough; Mr. Rentoul; Mr. W. H. Dodd, Sirhowy; Dr. Kartulis, Alexandria; Dr. Dulles, Philadelphia; Mr. P. Edgelow, Stroud; Messrs. Woollams and Co., London; Dr. Robert Kirk, Partick; Prof. Lee; Mr. Lumley; Mr. Buck; Mr. R. A. Owen, Bangor; Mr. Colam; Dr. Chatto; Mr. Newton; Mr. Brashew, Ebbw Vale; Mr. May; Mr. Bradley; Mr. Kelly; Mr. Brooks, Hull; Mr. Branthwaite, Twickenham; Mr. Lakin; Mr. S. S. Philip, London; Mr. Wheeler, Ilfracombe; Mr. Culley, Norwich; Dr. W. A. Duncan, London; Dr. Lovat; Mr. Herbert Page, London; Mr. J. L. Hewer, London; Mr. Hawkyard, Leeds; Dr. Murrell, London; Dr. H. Sutherland, London; Mr. M. Collier, London; Mr. W. H. Kesteven, London; Mr. Mayo Robson, Leeds; Dr. Casey, Windsor; Mr. J. O. Harris, Windsor; Messrs. Allen and Hanburys, London; Mr. Holmes, Anglefield Green; Messrs. Thomae and Co. London; Messrs. Müller and Co., Glasgow; Dr. Steele, St. Andrews; Messrs. Robertson and Scott, Edinburgh; Mr. Miller; Dr. Cousins, Virginia; Dr. Farmer, Bridgwater; Mr. Brown, Tredegar; Mr. J. H. Douty, Worcester; Dr. Dayson, Ebbw Vale; Mr. Johnson, Leicester; Mr. Jackson, Sheffield; Mr. Hoysted, Morden; Mr. Whall, Worksop; Mr. Chateau, St. Columb; Dr. W. Allen, Leadgate; Mr. Williams, Burton-on-Trent; Mr. McComb, Beccles; Mr. Beaumont, Bath; Mr. H. C. Ling, Scarborough; Mr. J. H. Neale; Mr. J. S. Loe, Leeds; Mr. Cantlie, London; Mr. R. M. Crookshank, Dresden; Dr. Ward Cousins, South. sea; Dr. Spatz, Munich; Dr. De H. Hall, London; Mr. J. C. A. Rogers, Southgate; A Disappointed One; A. T. H.; Physician, Manchester; Physician; Club; F. H. H.; Inquirer; H. B. T.; A First-year's Student.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Lovell; Mr. C. Jones, Ealing; Mr Winchester; Mr. Allard; Mr. Teague, Manchester; Mr. Kent, Eston; Mr. Bennett, Hastings; Mr. Young, Newcastle; Mr. Abbott, Sheffield; Dr. Hicks; Messrs. Lynch and Co., Manchester; Mr. Spicer, Chard; Mr. Sampson, York; Dr. Hayward, Liverpool; Messrs. Farwig and Co., London; Mr. Richard, Huddersfield; Dr. Marston; Mr. Hodgkinson, London; Mr. Rodgers, Nottingham; Mr. Pring, London; Dr. Milne, Accrington; Dr. Robertson, Clowne; Mr. Kilby, St. Peter's; Mr. Robertson, London; Dr. Webb; Mr. Gray; Mr. Paton, Swansea; Mr. Owen; Messrs. E. Smith and Co., London; Mr. Isaacs, Cheetham; Dr. Murray, Leith; Dr. Hayward, Liverpool; Mr. Utting; Mr. Wall, Wigan; Messrs. Sullivan Bros., Dublin; Mr. Atkinson, Halifax; Mr. Farley, Ontario; Mr. Hills, Margate; Mrs. Chotes, Forest Hill; Mr. Heywood, Manhester; Sussex; M.D., Manchester; Bachelor; Inverness Asylum; Agent, Exeter; Alpha; R. L. S., Hollingbush; O. Z.; A. P., Bristol; Spes., Tottenham; Medicus, Red Hill; L., Llandudno; Stethoscope, Stoke Newington; Medicus, Ebbw Vale; R. F. G., Whitby; M.D., Camdentown; Secretary, Limpley Stoke; B. W., Royston; X. Y. Z., Newcastle-on-Tyne; Gamma, Chester; L. S. A., Walthamstow; A. B. B., St. Peter's-park; Medicus, Reading; T. C., Manchester; Medicus, Sutton; M.R.C.S.; A. Z.; Medical; Surgeon, Chester; August; S. E., London; J. B. W.; R. J. C.; M.R.C.S., Birmingham; Beta, London.

Manchester Guardian, Aberdeen Daily Free Press, Bridlington and Quay Gazette, Church of England Temperance Chronicle, Liverpool Courier, West Yorkshire Pioneer, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M. Also on Thursdays at 2 P.M.

Tuesday, August 25.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Wednesday, August 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department: 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.

Thursday, August 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, August 28.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 29.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
MIDDLESEX HOSPITAL.—Operations, 2 P.M.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1 12 6	Six Months	£0 16 3
To CHINA AND INDIA		One Year	1 16 10
To the CONTINENT, COLONIES, AND UNITED STATES		Ditto	1 14 8

Post Office Orders should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable at the Post Office, Charing-cross.

Notices of Births, Marriages, and Deaths are charged five shillings.

Cheques to be crossed "London and Westminster Bank."

ADVERTISING.

Books and Publications (seven lines and under)	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
Every additional Line	0 0 6
Front Page	per Line 0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris